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ABSTRACT

"A Study of Schooling" is an in-depth descriptive study of 38 purposively sampled schools in the United States. Many aspects of the educational process were examined, from student attitudes to principal leadership styles. Essential to this comprehensive view of education is a view of within classroom processes, including teacher student interaction patterns, leadership modes, availability of materials, and grouping tendencies. This report provides a methodological overview of the observation system that was used to collect this classroom data, including a description of the instrument, the selection and training of observers, data reduction and definition of variables, and summary reports generated at the class, school, and subject levels of analysis. Appended are: (1) the five sections of the classroom observation instrument; (2) observer's manual; (3) variable specifications; (4) summary report on three sections of the instrument: physical environment inventory, daily summary, and classroom snapshot; and (5) summary report on another section: five-minute interactions. (JD)

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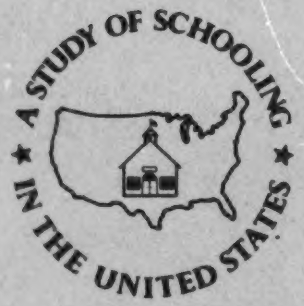
# A STUDY OF SCHOOLING

## Technical Report Series


A STUDY OF SCHOOLING ★ IN THE UNITED STATES ★

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# THE METHODOLOGY OF CLASSROOM OBSERVATION IN A STUDY OF SCHOOLING

Phillip Giesen
and
Kenneth A. Sirotnik

Technical Report No. 5

1979

A Study of Schooling is based upon the assumption that improving schools requires knowing what is happening in and around them. A comprehensive data-base of contextual information was obtained from students, teachers, administrators, parents and observers at all grade levels in thirty-eight elementary and secondary purposively sampled schools. *It is strongly recommended that readers of any technical report in this series first read Technical Report No. 1 which outlines the details, scope and limitations of the Study as a whole.*

*It must be understood that this series of technical reports does not constitute the Study.* Some reports are highly specific "molecular" inquiries while others take a more "molar" view across data sources, schooling levels, etc. Some reports are more methodological in nature arising out of issues in data analysis. Many of the reports quite naturally overlap in data analysed and interpretations rendered. Some authors have approached their task as consisting mostly of data description with little discussion beyond the presentation of the data. Others have ventured further into the realm of interpretation and speculation. *It must be further understood that data-based inferences can and do differ among researchers who come at the data from differing points-of-view.* Authors, therefore, are duly acknowledged for each report and are responsible for the material presented therein.

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## INTRODUCTION

A Study of Schooling is an in-depth descriptive study of 38 purposively sampled schools in the U.S. Most aspects of the educational process were examined, from student attitudes to principal leadership styles. Essential to this comprehensive view of education is a view of within classroom processes, including student/teacher interaction patterns, leadership modes, availability of materials and grouping tendencies. This report provides a methodological overview of the observation system that was used to collect this classroom data, including a description of the instrument, the selection and training of the observers, data reduction and the definition of variables, and summary reports generated at the class, school, and subject levels of analysis.

## DESCRIPTION OF THE OBSERVATION SYSTEM

### Background of the Instrument

During the initial stages of instrument development, several approaches to the observation of classroom processes were attempted. Most notably, the method of anecdotal observation was pilot tested in several schools and classrooms by a number of staff members. It became quickly apparent that (1) the quality of notes increased dramatically with the expertise and experience of the observer (2) even among good observers, a great deal of selectivity of events occurred (3) pages upon pages of notes, in various stages of legibility, emerged rapidly and (4) a good deal of time was required to cull out critical events with some comparability across classes (e.g. curricular common places). Considering the facts that (a) nearly 70 different data collectors, none of whom were apt to be curriculum specialists or experienced researchers, would be required to make the collection of data feasible and (b) three full observations (days at the elementary level and periods at the secondary level) were to be obtained for over 1000 classrooms, the method of anecdotal observation had to be abandoned.

Reviewing the literature and finding no one single instrument which seemed to meet our needs, the staff developed an observation schedule which we felt was trainable, comprehensive and codable for purposes of data analysis. This system was pilot tested in Riverside. (See Overman, 1979, for more details on the pilot test for all instrumentation developed for the Study.) The results were, again, disappointing: (1) the structure of the system was too rigid and did not adapt well to all classes (2) many questions required observer decision-making at a level too subjective for consistency between observers and (3) data reduction and computerization was still too time consuming considering the over 3000 observation protocols (3 per class) which were expected.

Returning to the literature, we reviewed existing observation systems more carefully and found that the instrument developed by Jane Stallings and her staff at the Stanford Research Institute (Stallings and Kaskowitz, 1974) came closest to meeting the research needs of A Study of Schooling.[*] Moreover, it had the potential for (a) several important instrument modifications (see below) which were necessary for the Study and (b) completely computerized data reduction given the optical scanning format.

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[*] We wish to thank Jane Stallings and her staff for their help and their willingness to allow us to use and modify their observation system.

Before turning to the details of the observation system, we should note that the SRI instrument has proved to be useful in a wide range of studies, including the longitudinal "National Follow-Through Evaluation" (Stallings, 1975) and the "National Day Care Study." The present instrument was modified in a number of significant ways to meet the specific needs of A Study of Schooling. Nevertheless, the basic form and concept of the SRI observation system was retained.

## Form and Use of the Instrument

There are five major sections of the Classroom Observation Instrument (COI): Identification Information, Physical Environment Inventory (PEI), Classroom Snapshot (CS), Five-Minute Interaction (FMI) and Daily Summary (DS). Appendix A presents each section as it appears in the optically scannable booklet. (Four replications of the CS/FMI sections actually occur in the booklet.)

The first section, the Identification Information, appears on the front cover of the COI booklet and includes grids to record numbers identifying school and classroom observed, grade level, number of students enrolled, subject area, scheduled class duration, date of observation, data collector number, observation number (day of observation) and booklet number. The name of the school, teacher, room number, period number, class title and data collector name are also written in this section to serve as a check on the accuracy of the grids. The numbers of teachers and aides that regularly work in the classroom are also recorded.

The second section, the Physical Environment Inventory, appears on the inside front cover page and records the architectural arrangement of the classroom, seating and grouping patterns, furnishings, and materials and equipment within the classroom.

The third section, the Classroom Snapshot (CS), appears four times throughout the COI booklet and yields data about what each adult and child in the classroom is doing, the size of the groups of students, and the nature of the activities in progress. From this record, questions can be answered such as: "How does the teacher spend her time and with whom?" or "How do the aides spend their time and with whom?" or "How often are students operating independent of direct adult supervision?" and "What activities are occurring?"

The fourth section of the COI (which also appears four times throughout the booklet) begins with the "preamble" for recording the subject engaged in and the time at which the Five-Minute Interaction is started. Each of the following 70 FMI frames has five response categories for the observer: "Who does the actions?" "To whom is it directed?" "What is done?" "What is the context of the action?" and "How is it done?" These categories, when transposed, create a sentence which is a portion of the classroom interaction. If, for example, the teacher asks a student a question such as, "John, what was your reaction to the film about the Constitutional Convention?" the teacher (code T) is "Who" did the action, the student (code S) is to "whom" it was done, the open-ended question (2) "what" was done and the "context" was instructional (I). The resultant code would then read simply TS2I. In addition, if the question were, for example, asked by the teacher in a tone of anger or obvious frustration (-for negative affect) or, on the contrary, while touching the child (T), the sentence would be modified to include "how" the action was done by adding a - or a T to the action descriptor. If both anger and touching were in evidence, both T and - would be recorded. The next frame, using the same five categories, records the response or completion of the interaction. In a one-way communication (such as a teacher correcting papers), it continues to describe the primary action of the teacher.

At the end of the FMI, a space is provided to record the time that the FMI is completed and whether or not the subject matter or content in evidence during the five minutes has changed. Content change will be specifically applicable to the elementary school since the subject changes periodically at that level.

Finally, the sixth section appearing inside the back cover of the booklet, the Daily Summary, affords an overview of the space and materials available as well as the decision-making process in evidence by students and teacher.

Appendixes B and C contain the training materials for all sections of the COI and, as such, contain all necessary code definitions. (See the section below on training.)

To summarize, each observation booklet consisted of the identification cover sheet, the PEI, four sets of CS and FMI sections, and the DS. The use of this booklet differed slightly at the elementary and secondary levels, although at both levels 3 full observation protocols were obtained for most classes during the course of approximately two weeks alloted for the observation phase at each school.

Elementary. At this level, one full observation consisted of an entire class day. In effect, the class day was divided up into roughly four equal parts of approximately one hour each. One COI booklet was completed during the course of each hour, such that one set of CS and FMI was completed roughly every fifteen minutes. For one full observation, therefore, four complete COI booklets would be completed. Only the last booklet, however, would contain the completed DS. The complete elementary class, 3-day observation, ideal protocol was based, therefore, upon 12 COI booklets, and, thus, 3 DS's and 48 sets of CS's and FMI's. (The PEI, being a static accounting, was done only once and was noted only in the first booklet.) As it turned out, the following averages were actually obtained for the 129 elementary classrooms observed:

| | |
|---|---|
| # days observed ........ | 2.99 |
| # booklets completed .... | 11.73 |
| # FMI's completed ....... | 45.62 |
| # Frames/FMI ............ | 59.01 |
| # Snapshots completed ... | 41.46 |

Secondary. At the junior high/middle and senior high levels, one full observation consisted of an entire class period. In effect, the period was divided up into roughly four equal parts of approximately 10-15 minutes each, depending upon the period length. One COI booklet was completed during the course of each observation (period), such that one set of CS and FMI was completed during each of the 10-15 minute parts. The complete secondary class, 3-period observation, ideal protocol was based, therefore, upon 3 COI booklets and, thus, 3 DS's and 12 sets of CS's and FMI's. (Again, the PEI appeared only in the first booklet.) As it turned out, the following averages were actually obtained for the 362 junior high/middle and 525 senior high classes observed:

| | Junior | Senior |
|---|---|---|
| # periods observed (or booklets completed) ...... | 2.98 | 2.99 |
| # FMI's completed ............. | 11.66 | 11.77 |
| # Frames/FMI .................. | 58.02 | 59.68 |
| # Snapshots completed .......... | 10.72 | 10.83 |

## Modifications Specific to A Study of Schooling

The original SRI classroom observation instrument was designed for a study of early elementary classrooms involved in the National Follow Through program. Subsequent development at SRI incorporated modifications which were aimed at improving the definitions of the categories observed and extending the universality of its potential utilization. At SRI a revised edition was used in the National Day Care Study and efforts were in process to expand its applicability to the secondary level as well. In both of these modifications, the basic form and mechanics of the original instrument were maintained.

When A Study of Schooling became interested in the SRI observation instrument, communication was established with SRI to explore the possibility of some sort of subcontract whereby SRI would help to modify the instrument and train the required number of data collectors. The instrument used as the basis for these discussions was the preliminary secondary school modification. Subsequent discussion led to the conclusion that the instrument, with some modification, would fit in well with the goals of A Study of Schooling. However, because of both logistic and financial considerations, it was deemed advantageous to hire one of the instrument's original developers, rather than have the SRI staff directly involved in the instrument modification and training of observers. This arrangement was approved by Dr. Jane Stallings, the director of the Classroom Observation Program at SRI. These modifications, made by the staff of A Study of Schooling, were actually an extension of the aforementioned adaptation of the instrument to the secondary school level, so that, in final form, the system would be usable at both the elementary and secondary levels. The extent of modification varied from section to section but all sections were changed to some degree. In addition, a new section was added (the Daily Summary).

The Daily Summary was added to the end of the instrument and was designed to assess two other major components of the classroom: the adequacy of space and materials and the level of teacher versus student decision-making. These categories were designed to complement other data sources of the Study that provided information on these essential elements of the classroom.

The Physical Environment Inventory had existed on the original SRI instrument but had not been adapted to include secondary level classrooms. It was, therefore, redesigned to include descriptors of the following general physical aspects of the classroom that were particularly relevant to the Study of Schooling: 1) actual space, 2) flexibility of seating arrangements, 3) learning centers, 4) soft furniture, 5) art work, 6) global education displays, and 7) availability of equipment and materials. The overlap with the original SRI instrument included the questions on space, flexibility of seating and, to some extent, the materials and equipment, but the rest of the modifications were specific to A Study of Schooling.

The two most complex sections of the instrument, the Snapshot and the FMI, were changed such that the basic principles and procedures involved were maintained, but particular descriptors or definitions were changed to meet the needs of the current Study. The changes mentioned before in the preliminary modifications by SRI of the Snapshot were continued and field tested in order to make the instrument practical, as well as relevant to the Study. The Snapshot changes fell primarily into four significant areas:

1. The number of, and range within, activities was expanded, as a result of field testing, in order to be able to record the total range of classroom occurrences.
2. The activity definitions were modified to correspond more closely with definitions of activities utilized on other instruments in the Study.

3. The location of the subject code designator was changed so that the subject could be identified more closely with the given activity.

4. Two questions were added that were designed to assess the overall student interest level.

An example of the first type of change is seen by the inclusion of the activity "Discussion" and the exclusion of the SRI activity "Blocks and Toys." This type of change, while expanding the range of the instrument (discussion occurs at all grade levels), lost little in specificity since "Blocks and Toys" is included in the activity "Practice or Perform" (psycho-motor physical). Furthermore, the latter category, while more general, is the same as those used on other instruments in the Study.

The changes in the activity designations might best be described by saying that the change was one of replacing elementary content descriptors with more universal activity categories. The original SRI instrument focused on categories such as Arts and Crafts or Science and Natural World whereas the modified (or expanded) version includes discussion, demonstration or test taking activities. In addition, this form includes the content or subject descriptor codes.

The Five Minute Interaction was changed in two main respects. First, some modifications were made in the codes used in each section of the FMI frame. Secondly, and most significantly, a section was added to each frame which included codes to identify the context in which any particular interaction occurred.

SRI had previously identified specific interactions which dealt only with "Behavior" or "Reading/Math" content. We decided to expand this concept into a system of four categories that would identify all interactions according to the context in which they occurred: either instructional, routine, behavioral (i.e., deportment), or social (i.e., remaining non-instructional, non-behavioral and non-routine interactions). This addition greatly simplified the instrument and facilitated straightforward estimates of time spent in each of these contextual modes.

In summary, the final form of the Classroom Observation Instrument retained the basic format of the original SRI instrument but also incorporated these significant modifications: (1) useability at both elementary and secondary levels (2) separability in terms of all major content areas and (3) separability in terms of the four major contexts, describing the use of classroom time.

## TRAINING

Training of data collectors for the observational aspect of the Study of Schooling was conducted in two stages: once in the Spring of 1977 and, again, in the Fall of that same year. Concerted effort was expended to insure a high level of training and consistency across the two stages as well as at the seven different sites. This section will describe the processes involved in insuring that these ends were met.

### Preparation of Trainers

Training actually began during the modification and field testing process. The original observation director, hired from SRI, carried out the field testing with the assistance of a person hired to help him in that process. These two, working closely with the rest of the staff, refined and clarified the definitions of the various codes. This process not only led to well defined and tested codes, but also to two trainers with extensive experience in the use of those codes. This pair, then, conducted the Spring 1977 training at the 3 different sites (states).

For the Fall 1977 training, it was apparent that two trainers for the remaining four sites was an impossibility since three of the training sessions had to be conducted simultaneously, due to school schedule considerations. Fortunately, one of the star pupils from the spring observation cadre was available to become the third trainer. Utilizing this common base of knowledge and experience, these three trainers, then, spent the summer months brushing up on their reliability and standardizing the training procedures. A pre-training session was also conducted for the four site coordinators. This training served the dual purpose of assuring this standardization of procedures, as well as equipping one person at each site who could assist in the actual training. Two of these four people had previous experience with the observation system and the other two had extensive experience in training and education.

## Selection of Observers

Since the classroom observers ultimately provide data describing the actual teacher/student interactions, the selection and training of the observers was of critical importance to the success of the Study. Site coordinators in each state, therefore, followed a rigorous selection procedure. In selecting observers, the site coordinators sought the following qualities and qualifications:

(1) Personal ability--The ability to learn rapidly, retain information, and build concepts around given symbols.

(2) Education--A college degree was considered desirable but not essential. Ex-school teachers were considered ideal but scrutinized with care, to determine any indications of possible biases.

(3) Attitude--Observers were expected to have a professional attitude towards the data collection effort, which included objectivity in dealing with the data and the ability to treat all data as confidential.

(4) Residence--Observers should be from the local target school community and should speak the language of the community. However, applicants who were part of the school system, or related to school personnel were not eligible to be observers.

(5) Experience--The observers were required to have had experience in working with children.

In an effort to allow for the unpredictability of people's lives and the potential inability of a trainee to meet our predetermined standards, one more trainee was hired than would be required for observation. After the first session we realized that this had a negative effect on the morale of the group since someone had to be terminated at the end of the training. Our solution was to try to help all of the trainees attain the reliability criterion (see below), while assuring the trainees that even if all passed an alternative position such as administrative assistant was available. The procedure maintained trainee motivation but eliminated the undue anxiety.

### Training Procedures

In the week prior to the actual observation training session, the data collectors met with the site coordinator for a couple of days. The purpose was to acquaint the trainees with the Study of Schooling and the overall procedural requirements. During this time, the trainees received Section I of the training manual which included a Pre-Training Kit (see Appendix B). This package consisted of a manual which defined the FMI coding system and included three coding exercises. The observer trainees were expected to study the materials, to memorize the codes, to complete the coding exercises, and to be able to pass a simple coding exercise on the first day of the training session.

The actual training time was eight days in the three Spring data collection sites. The Fall '77 training which included the four remaining sites was extended to nine days since the training director was not at all of the sites. In these later sites, the intention was to have the site coordinator act as the assistant trainer. In practice this approach was not ideal since the site coordinator was often forced to fulfill his/her other responsibilities and commitments.

The training itself was an intense, graduated process in which trainees slowly progressed in observation skills to the point where they observed and recorded classroom occurrences reliably. The training sessions employed a variety of procedures designed to insure this progression. Lecture, discussion, homework, role playing and other activities were used as well as slides, video tapes, and classroom visits to add realism to these activities. The following paragraphs will only summarize this training procedure. For a thorough understanding of the COI, the reader must actually progress through the detail in Appendixes B and C.

While the majority of the training focused specifically on teaching the codes, the first morning was utilized to set a context within which this learning could take place. The aims of A Study of Schooling and the role of classroom observation in the Study were presented first. Next the history of the instrument, how the separate parts of the instrument mesh together, and its capabilities and limitations were discussed. Finally, an overview of training was presented, attempting to make explicit the procedures to be utilized, as well as the philosophy and goals.

Once this introduction was digested, the actual training on FMI codes began. Initially, there was a review and discussion of the code definitions to insure that the trainees had done the homework and to clarify possible misinterpretation. Soon speed drills and codings of role-played (in slow motion) vignettes were introduced. Thus, the pattern of recognition and speed drills was introduced in the first day using a variety of learning activities to minimize the inevitable fatigue.

Subsequent training consisted of practice with the FMI codes in a variety of ways slowing down only to introduce the other, simpler (in terms of memorization requirements) sections of the instrument: Identification Page, Physical Environment, Snapshot and Daily Summary sections (see Appendix C). Homework, student written vignettes and the ever present speed drills continued, interspersed among the slides used to demonstrate, for example, variation in the physical environment of the classroom. During all of this, particular attention was paid to the progress of individuals since if anyone got behind it was almost impossible to catch up with the rapid pace. If it appeared that any problem area was developing for a particular individual, special assignments such as specific reviews of previous homework or coding of T.V. at home were tailored to their needs.

The trainees spent approximately 6 hours over a 3-day period observing in local school classrooms, with a trainer present to provide immediate feedback. Usually, the trainees worked as partners for each classroom observation, and both partners coded the same person simultaneously for some of their FMI's. As a check on reliability, the trainers also coded at least one FMI simultaneously with each of their trainees each day.

Videotapes of classroom activities were also used for coding practice. Although trainees find it much more difficult to code from videotapes than from a live classroom setting, the use of videotapes is an invaluable method for clarification of code definitions and for achieving agreement among observers. When observers disagreed, the tape could be backed up and replayed, until clarification and consensus was reached. The tapes, being as difficult as they were because of the limited focus of the picture, served to make the classroom visits easy by comparison.

Each day, the trainees coded a timed section of videotape and their protocols were checked against the trainers' precoded protocols. Code disagreements and sequences of interactions were, then, discussed with individual observers. Homework exercises were assigned each day of the session. The next morning, the trainees formed small groups, corrected their homework, and discussed coding disagreements. Such discussion resulted in a better understanding of the code categories.

At the completion of training, the observer trainees were required to demonstrate their competency on the instrument. The criterion set for demonstrating this competency was that the trainee be able to code both the snapshot and the FMI with 80% reliability; and, in the case of the FMI, it had to be done at a minimum rate of fifty complete frames within a five minute period. Three criterion video tapes for the FMI and written classroom descriptions for the Snapshot were utilized as the vehicle for this exam.

## DATA REDUCTION AND VARIABLE DEFINITION

By now, the reader may have the reasonably correct impression that the COI represents a relatively objective and complex, yet trainable and readily computerizable, observation system. Lest the reader be seduced by the overall simplicity of the concept, however, we must point out here that the process of data reduction--the act of organizing the multitude of bits and pieces of information into larger chunks of substantive meaning--was not a trivial task. Conceptualizing the problem, developing variable specifications, and designing and implementing the necessary computer software were all extraordinarily time-consuming efforts. For discussion purposes, three major phases can be identified:

Phase 1. Optical scanning and the creation of binary tape records was carried out by the Intran Corporation in Minneapolis, who also printed the observation booklets. It should be noted that each observer went over their observation books at the end of each working day, erasing stray marks and darkening marked bubbles. A Study of Schooling staff member also spent several days at Intran prior to scanning, making sure that all booklets were in order with properly encoded identification sheets.

Phase 2. The binary tapes were sent to SRI, which, under contract to A study of Schooling, developed and implemented the necessary software for the primary data reduction task, given the variable specifications to be discussed shortly.

Phase 3. The resultant tapes of binary coded decimal records were sent to A Study of Schooling for the secondary stage of data reduction wherein variables and composites of variables were selected and formed for two main purposes: (a) descriptive and comprehensive reports at the classroom, school and subject levels (see next section), and (b) further analyses with merged data files consisting of teacher, aggregated student, and observation data. The former purpose required a second wave of extensive software development which was carried out by staff at A Study of Schooling. The latter phase utilized results of the former phase and existing statistical software packages.

As noted above, the process of specifying the exact requirements for variable construction (Phase 2) was rather complicated. Only a general description of the CS and FMI will be given here. The interested reader is directed to Appendix D for the details.

The core of the Snapshot data can be arranged in the form of several matrices once it is recognized that these three dimensions are operating: (1) activity type (e.g., discussion, written assignment, etc.) (2) director type (T,A,S,C or I) and (3) group type (one, small, medium, large or total). If we consider only those activities in which all students (and possibly adults) in the system (i.e. class) can be accounted for at any moment in time, i.e. activities 1-13, three matrices can be constructed: (a) 13 activity-by-5 director types (b) 13 activity-by-

5 group types and (c) 5 director-by-5 group types. Moreover, a fourth matrix, the 13 activity-by-5 director-by-5 group type matrix can also be formed. (Clearly, certain cells in these matrices are not relevant by definition since not all director types are relevant for every activity.)

The data in these matrices can be of two distinct types: (1) simple frequency counts of the number of times the particular combination of activity, director and/or group occurs (2) the number of students involved in the combination. This latter data type is an estimate based upon a converging algorithm commensurate with class size and the operational definition of the sizes (weights) of the five group types. As a result, nearly 500 variables can be produced from this section of the Snapshot alone. The nature of these and other variables which are based on the CS will become clearer in the next section.

Noting that the use of the FMI was adult-focused (either the Who or To Whom sections of the FMI frame was a T, A or O), nearly 1000 code combinations (sentences) involving the Who, To Whom, What and Context categories can be logically generated. Adding one or more How codes to these increases the possibilities considerably. Ordinarily, not all of the logical possibilities are operationally defined nor is every defined sentence of substantive interest in and of itself. Rather, composites of sentences are usually of more interest, and the logical specifications of these are what constitute the FMI variable definitions. For example, "time spent on instruction" can be defined in relative terms as the proportion of total FMI frames with I "bubbled" in the Context category, regardless of the other category codes. A more specific composite example is the "amount of corrective feedback with guidance given by the teacher to one or more students. In relative terms, this amounts to computing the proportion of FMI frames conforming to any of the following configurations:

Who - - - T
To Whom - - - S, D, 2, Sm, M or L
What - - - 9
Context - - - I, R, B or S
How - - - G and any other How's

If we wanted this information in just the behavioral context, for example, we would restrict the Context code to B.

Again, the details of variable specification for all sections of the COI are provided in Appendix D.

## SUMMARY REPORT GENERATORS

Due to the number of variables defined and the complexity of the instrument, it was necessary to provide comprehensive descriptions of the entire observation protocol for each classroom and then summarize (aggregate) these descriptions over classrooms by content (within and across schools) and by school (within and across levels, i.e., elementary and secondary).

The exemplary reports included in Appendixes E and F become fairly self-explanatory once one becomes familiar enough with the observation system at an applied level. In other words, to really understand these reports, and, for that matter, the variable descriptions in Appendix D, the reader must seriously go through the training materials in Appendixes B and C.

Briefly, Appendix E presents an example of a secondary class report including the Physical Environment Inventory, the Daily Summary and the Classroom Snapshot variables. The snapshot data is presented exactly in terms of the matrices discussed in the previous section. The data, in terms of both frequency and estimated number of students, are presented in relative (percentage) terms, depending upon which matrix is being presented. In effect, first the activity, director, and group marginal data are presented as percentages of the total. Second, the non-zero cells of the three, 2-dimensional matrices are listed in lexographic order with percentages computed by row, column and total. Finally, the non-zero cells of the 3-dimensional array is presented in analogous fashion. Both secondary and elementary reports are identical through the Snapshot summary. The elementary report continues on, however, repeating the Snapshot summary separately by each content observed. (In this case, percentages can be computed either relative to the overall content totals or to the totals for each content area separately.)

Appendix F presents examples of the FMI report for secondary classes. Essentially, the variables defined in Appendix D are presented in percentage terms for each context and over all contexts. Again, elementary and secondary reports are identical except for the additional lists for elementary classes separating out the different content areas observed.

It should be emphasized that any class report is a summary (using averages or percentages) of all observation data collected over the 3 observations (periods, for secondary classes; days, for elementary classes).

## REFERENCES

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Stallings, J. and Kaskowitz, D. Follow through classroom observation evaluation 1972-1973. SRI Project URU-7370, 1974, Stanford Research Institute.

Stallings, J. Implementation and child effects of teaching practices in follow through classroom. Monographs of the Society for Research in Child Development, 1975, 40, (7-8, Serial No. 163).

# APPENDIX A

## The Five Sections of the Classroom Observation Instrument:

Identification Sheet
Pysical Environment Inventory
Classroom Snapshot
Five Minute Interaction
Daily Summary

AN ADAPTATION OF THE SRI OBSERVATION SYSTEM

A STUDY OF SCHOOLING IN THE UNITED STATES

**|I|D|E|A|**

**INSTITUTE FOR DEVELOPMENT OF EDUCATIONAL ACTIVITIES, INC.**

# Elementary/Secondary OBSERVATION INSTRUMENT

| School No. | | Class No. | | |
|---|---|---|---|---|
| ⓪ | ⓪ | ⓪ | ⓪ | ⓪ |
| ① | ① | ① | ① | ① |
| ② | ② | ② | ② | ② |
| ③ | ③ | ③ | ③ | ③ |
| ④ | ④ | ④ | ④ | ④ |
| ⑤ | ⑤ | ⑤ | ⑤ | ⑤ |
| ⑥ | ⑥ | ⑥ | ⑥ | ⑥ |
| ⑦ | ⑦ | ⑦ | ⑦ | ⑦ |
| ⑧ | ⑧ | ⑧ | ⑧ | ⑧ |
| ⑨ | ⑨ | ⑨ | ⑨ | ⑨ |

| Grade Level | | | |
|---|---|---|---|
| From | | To | |
| ⓪ | ⓪ | ⓪ | ⓪ |
| ① | ① | ① | ① |
| ② | ② | ② | ② |
| ③ | ③ | ③ | ③ |
| ④ | ④ | ④ | ④ |
| ⑤ | ⑤ | ⑤ | ⑤ |
| ⑥ | ⑥ | ⑥ | ⑥ |
| ⑦ | ⑦ | ⑦ | ⑦ |
| ⑧ | ⑧ | ⑧ | ⑧ |
| ⑨ | ⑨ | ⑨ | ⑨ |

| No. Stdnts. Enrolled | |
|---|---|
| ⓪ | ⓪ |
| ① | ① |
| ② | ② |
| ③ | ③ |
| ④ | ④ |
| ⑤ | ⑤ |
| ⑥ | ⑥ |
| ⑦ | ⑦ |
| ⑧ | ⑧ |
| ⑨ | ⑨ |

| SECONDARY ONLY | |
|---|---|
| Per. No. | Subject Area |
| ① | ① English |
| ② | ② Mathematics |
| ③ | ③ Social Studies |
| ④ | ④ Science |
| ⑤ | ⑤ The Arts |
| ⑥ | ⑥ Foreign Language |
| ⑦ | ⑦ Vocational/Career Education |
| ⑧ | ⑧ Physical Education |
| ⑨ | |
| ⑩ | |

| Scheduled Class Duration | | |
|---|---|---|
| From: | | |
| Hour | Minute | |
| ⑦⑧⑨⑩⑪⑫ | ⓪①② | ⓪①②③④ |
| ①②③④⑤ | ③④⑤ | ⑤⑥⑦⑧⑨ |
| To: | | |
| Hour | Minute | |
| ⑦⑧⑨⑩⑪⑫ | ⓪①② | ⓪①②③④ |
| ①②③④⑤ | ③④⑤ | ⑤⑥⑦⑧⑨ |

| Today's Date | | | | | |
|---|---|---|---|---|---|
| Mo. | | Day | | Yr. | |
| ⓪ | ⓪ | ⓪ | ⓪ | ⓪ | ⓪ |
| ① | ① | ① | ① | ① | ① |
| ② | ② | ② | ② | ② | ② |
| ③ | ③ | ③ | ③ | ③ | ③ |
| ④ | ④ | ④ | ④ | ④ | ④ |
| ⑤ | ⑤ | ⑤ | ⑤ | ⑤ | ⑤ |
| ⑥ | ⑥ | ⑥ | ⑥ | ⑥ | ⑥ |
| ⑦ | ⑦ | ⑦ | ⑦ | ⑦ | ⑦ |
| ⑧ | ⑧ | ⑧ | ⑧ | ⑧ | ⑧ |
| ⑨ | ⑨ | ⑨ | ⑨ | ⑨ | ⑨ |

| Data Collector No. | |
|---|---|
| ⓪ | ⓪ |
| ① | ① |
| ② | ② |
| ③ | ③ |
| ④ | ④ |
| ⑤ | ⑤ |
| ⑥ | ⑥ |
| ⑦ | ⑦ |
| ⑧ | ⑧ |
| ⑨ | ⑨ |

| Obs. No. | Book No. |
|---|---|
| ① | ① |
| ② | ② |
| ③ | ③ |
| ④ | ④ |
| ⑤ | ⑤ |

○ Reliability

⓪①②③④ Number of teachers that regularly work in the classroom

⓪①②③④ Number of aides that regularly work in the classroom

School ____________________

Teacher ____________________

Room # ________ Period # ____________

Class Title ____________________

Data Collector ____________________

## PHYSICAL ENVIRONMENT INVENTORY

**A. Space**

1. ○ Open structure
   ○ Open structure with furniture/walls used to partition
   ○ Multiple rooms with movable walls used as open space
   ○ Multiple rooms with movable walls used as single room
   ○ Single room/Rec. area

**Classroom equivalence**

○ 2 classes
○ 3-4 classes
○ 5-6 classes
○ 7-8 classes
○ 9 or more classes

2. ○ Adjacent patio or outside work space
   ○ Adjacent room for work space, storage, teacher's office
   ○ Room opens into inside common area
   ○ Room without adjacent usable space

**B. Furniture/Furnishings**

1. ○ Desks or tables with seats attached
   ○ Desks or tables with movable chairs
   ○ Combination

2. ○ Fixed desks/tables
   ○ Movable desks/tables
   ○ Combination

3. ○ Desks/tables in rows
   ○ Desks/tables in arrangement other than rows
   ○ Combination

4. ○ 3 or more learning centers
   ○ 1 or 2 learning centers
   ○ No learning centers

5. ○ Stuffed furniture, sofa, chairs, pillows, etc.

6. ○ Rugs, carpet

7. Degree of alteration to physical environment
   ○ Little or no alteration
   ○ Moderately altered
   ○ Highly altered by display of objects or materials

8. ○ Art work primarily commercially or teacher made
   ○ Art work primarily student made

9. ○ One or more displays having to do with countries other than the U.S.

**C. Equipment and materials**

○ Books, magazines
○ Games, puzzles
○ Maps, globes
○ Live animals
○ Live plants
○ Teaching aids
○ Tapes/Records
○ AV equipment
○ Chalkboard
○ Art materials
○ Teaching machines
○ Overhead projectors

## CLASSROOM SNAPSHOT

| ACTIVITIES | | One Student | Small Groups | Medium Groups | Large Groups | Total Class |
|---|---|---|---|---|---|---|
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 1. Preparation for Assignments or Instructions/Cleanup | I | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. ○ Story Time ○ Materials and Equipment | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 2. Explain, Lecture, or Read Aloud | S | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 3. Demonstration | S | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 4. Discussion | C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 5. Simulation, Role Playing | C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 6. Reading | I | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 7. Work on Written Assignments | I | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 8. Practice or Perform (psycho-motor, physical) | I | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 9. Practice or Perform (verbal) | I | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 10. Taking Test or Quiz | I | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | I | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |

11. Audio Visual Equipment ○ Television, Radio ○ Tapes, Records
○ Tchg Machines ○ Films, Filmstrips

12. Student Non-Task Behavior or Teacher Social Interaction with Student(s) – No Assignment

| | | | | | |
|---|---|---|---|---|---|
| T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| I | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |

○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. ○ No Subject

| | | | | | |
|---|---|---|---|---|---|
| T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |

13. Adult Disciplining Students

○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E.

①②③④ Teacher ①②③④ Aides

14. Adult Monitoring and/or Observing Students

○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. ○ No Subject

①②③④ Teacher ①②③④ Aides

15. Adult Custodial, Routines

○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E.

①②③④ Teacher ①②③④ Aides

16. Adult Not Involved

○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E.

| | | | | | |
|---|---|---|---|---|---|
| C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| I | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |

17. Student Non-Task Behavior During Subject

○ 0–24% ○ 25–49% ○ 50–74% ○ 75–100%

18. Percentage of Class at High Interest Level

**For This Snapshot Only**

Number of Teachers in Classroom ⓪①②③④

Number of Aides in Classroom ⓪①②③④

Number of Visitors in Classroom ⓪①②③④

Number of Students

| | |
|---|---|
| ⓪ | ⓪ |
| ① | ① |
| ② | ② |
| ③ | ③ |
| ④ | ④ |
| ⑤ | ⑤ |
| ⑥ | ⑥ |
| ⑦ | ⑦ |
| ⑧ | ⑧ |
| ⑨ | ⑨ |

## FIVE MINUTE INTERACTION

| Time Started | | |
|---|---|---|
| Hour | Minute | |
| ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ | ⓪ ① ② | ⓪ ① ② ③ ④ |
| ① ② ③ ④ ⑤ | ③ ④ ⑤ | ⑤ ⑥ ⑦ ⑧ ⑨ |

**Content Start**

① Eng.
② Math
③ Sci
④ S.S.
⑤ Arts
⑥ F.L.
⑦ P.E.
⑧ Other

1

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | W T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D ~ + − |

2

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | W T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D ~ + − |

3

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | W T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D ~ + − |

4

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | W T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D ~ + − |

5

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | W T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D ~ + − |

6

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | W T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D ~ + − |

7

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | W T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D ~ + − |

8

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | W T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D ~ + − |

9

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | W T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D ~ + − |

10

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | W T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D ~ + − |

11

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | W T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D ~ + − |

12

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | W T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D ~ + − |

13

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | W T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D ~ + − |

14

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | W T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D ~ + − |

**15**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**16**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**17**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**18**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**19**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**20**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**21**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**22**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**23**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**24**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**25**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**26**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**27**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**28**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**29**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**30**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**31**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**32**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**33**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

**34**

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | ~ | + | − |

35

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

36

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

37

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

38

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

39

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

40

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

41

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

42

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

43

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

44

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

45

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

46

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

47

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

48

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

49

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

50

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

51

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

52

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

53

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

54

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

55

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | NV T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D N + − |

56

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | NV T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D N + − |

57

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | NV T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D N + − |

58

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | NV T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D N + − |

59

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | NV T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D N + − |

60

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | NV T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D N + − |

61

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | NV T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D N + − |

62

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | NV T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D N + − |

63

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | NV T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D N + − |

64

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | NV T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D N + − |

65

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | NV T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D N + − |

66

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | NV T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D N + − |

67

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | NV T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D N + − |

68

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | NV T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D N + − |

69

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | NV T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D N + − |

70

| | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | NV T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 | | G D N + − |

| Time Stopped | | | Content Change? |
|---|---|---|---|
| Hour | Minute | | |
| 7 8 9 10 11 12<br>1 2 3 4 5 | 0 1 2<br>3 4 5 | 0 1 2 3 4<br>5 6 7 8 9 | ○Yes<br>○No |

**Daily Summary**

**1. Space**

○ Crowded
○ Adequate
○ Spacious

**2. Adequacy of materials**

○ Adequate
○ Inadequate

**3. Student use of materials and equipment**

○ Unrestricted
○ Partially restricted
○ Restricted
○ No opportunity to observe

**4. Locus of Decision Making**

| | Predominantly Teacher | Predominantly Students | Not Obs. |
|---|---|---|---|
| Seats | ○ | ○ | ○ |
| Groups | ○ | ○ | ○ |
| Content | ○ | ○ | ○ |
| Materials | ○ | ○ | ○ |
| Space | ○ | ○ | ○ |
| Time | ○ | ○ | ○ |
| Learning Activities | ○ | ○ | ○ |

# APPENDIX B

## Observer's Manual: Section I

(Includes Pre-Training Kit)

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# OBSERVER'S MANUAL
# PRE-TRAINING KIT

# ELEMENTARY AND SECONDARY SCHOOL OBSERVATION INSTRUMENT

(AN ADAPTATION OF STANFORD RESEARCH INSTITUTE OBSERVATION INSTRUMENT)

## SECTION I

## OVERVIEW OF OBSERVATION INSTRUMENT CODE DEFINITIONS

(ADULT FOCUS)

# I. INTRODUCTION

## A. BACKGROUND

"The Study of Schooling in the United States," conducted by |I|D|E|A|, is a descriptive overview of contemporary American education. All aspects of the educational system will be examined, from student attitudes to staff organizational procedures. Essential to this comprehensive view is the student/teacher interaction and the student/teacher grouping patterns within the classroom.

To document the wide range of instructional approaches in practice in the United States, |I|D|E|A| has selected an instrument developed by Stanford Research Institute (S.R.I.). This instrument has proved to be useful in a wide range of studies, including the longitudinal "National Follow-Through Evaluation" and the current "National Day Care Study." The instrument has, of course, been adapted to the specific needs of the "Study of Schooling in the United States," but the basic form has been retained. The resultant instrument provides a physical measure of the classroom environment, an index of classroom activities, and a description of the interaction between adults and students. For instance, a math instruction process may be defined in terms of group size, materials used, and the adult's pattern of interaction with the students. This information will therefore allow for differentiation among classrooms at a level which is practical and can be utilized by both teachers and administrators.

## B. DESCRIPTION OF THE INSTRUMENT

There are six sections of the Classroom Observation Instrument (CO): Identification Information, Physical Environment Inventory (PEI), Classroom Snapshot (CS), Preamble, Five-Minute Interaction (FMI) and Daily Summary.

The first section, the Identification Information, includes grids to record numbers identifying school and classroom observed, grade level, number of students enrolled, subject area, scheduled class duration, date of observation, data collector number, observation number (day of observation) and booklet number. The name of the school, teacher, room number, period number, class title and data collector name are also written in this section to serve as a check on the accuracy of the grids. The number of teachers and aides that regularly work in the classroom are also recorded.

The second section, the Physical Environment Inventory, records architectural design of the classroom, seating and grouping patterns, furnishings, and materials and equipment within the classroom.

The third section, the Classroom Snapshot (CS), yields data about what each adult and child in the classroom is doing, the size of the groups of students, and the nature of the activities in progress. From this record, questions can be answered such as: "How does the teacher spend her time and with whom?" or "How do the aides spend their time and with whom?" or "How often are students operating independently?" and "What activities are occurring?"

The fourth section of the instrument, the Preamble, records the subject engaged in and the time the following section, the Five-Minute Interaction, is started.

The fifth section of the CO instrument, the Five-Minute Interaction (FMI), uses five categories: "Who does the actions?" "To whom is it directed?" "What is done?" "Context of the action?" and "How is it done?" These categories when transposed create a sentence which is a portion of the interaction. The next sentence, using the same four categories, codes the response or completion of the interaction. In a one-way communication (such as a teacher correcting papers), it continues to describe the primary action.

At the end of the FMI is a space to record the time that the FMI is completed and whether or not the subject matter during the five minutes has changed. Content change will be specifically applicable to elementary school.

The sixth section, the Daily Summary, affords an overview of the space and materials available as well as the decision-making process.

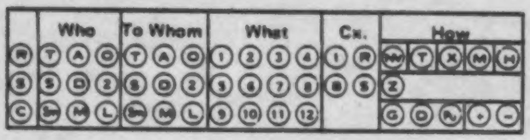
The observer observes four times per period (or hour) and completes one Classroom Observation Procedure (CS, Preamble, and FMI) during each observation. In addition, the booklet includes Daily Summary Information and Physical Environment Information sections which are completed once daily for each teacher. Identification Information is recorded on all booklets.

When all the Classroom Observation booklets have been returned to |I|D|E|A|, they are read by an optical scanning device. The optical scanner collects all the CO information and transfers it onto computer tapes. With all the information recorded on tape, the Classroom Observation data is ready for programming and analysis.

## II. FIVE-MINUTE INTERACTION

All six sections of the Classroom Observation Instrument are vital to the analysis of observation data. The sections will be explained, demonstrated, and practiced in the training session. However, the Five-Minute Interaction (FMI) requires more memorization and conceptualization than any other section; and if training is to proceed effectively, trainees must be familiar with the FMI codes. Therefore, the primary purpose of this Home Training Kit will be to serve as an initial learning device for the FMI section.

It is the FMI which records interactions in the classroom and student and adult behavior. It consists of 70 identical interaction frames, an example of which is shown below.



Each frame has six columns. The narrow column on the left contains the three codes Repeat Ⓡ, Second Language Ⓢ, and Cancel Ⓒ. Marking of these "control buttons" tells the optical scanner (1) to repeat the preceding coded frame which will duplicate the previous 5 seconds (Repeat), (2) that this frames action is in a language other than English. (Second Language), or (3) that this frame should not be recorded on the data tape (Cancel). These codes, and all other FMI codes, are operationally defined in section III.

The other five columns can be strung together to form an interaction sentence: Who, To Whom, What, Context, and How. The Who column contains nine codes that refer to a person or a group of persons. These codes identify the initiator or perpetrator of the action. In the sentence metaphor, the Who codes are the subject of the sentence.

The next column, the To Whom column, is comprised of the same nine codes as the Who column. In the interaction sentence, the codes in this column are the objects of the action--the person to whom a statement or action is directed. One code is marked in the Who column and one code in the To Whom column of each frame; no more than one code may be recorded in either column.

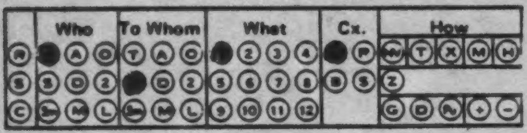
The What column contains twelve codes which are categories of actions or behaviors. Some examples are: Direct Question, Response, Praise, Comment, and Observation. These codes are the verbs of the interaction sentence. One and only one of the twelve What codes is coded in each frame.

The next four codes, in the Context column, describe the instructional relevancy of the interaction. They record whether the action has to do with the subject matter (instructional), classroom routines, behavior, or social (non-task related) activities. The purpose of this distinction is to separate instructional material from other possible classroom interactions (routines, behavior, social). Again, the four codes are mutually exclusive; only one code per frame is possible.

The eleven How column codes are modifiers of the What codes. They add information about the action, describing content or affect. These codes act as adverbs in the interaction sentence. In contrast to the other sections, one or more than one of the How codes may be coded.

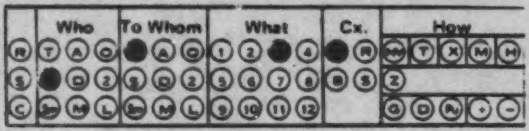
A complete interaction sequence will take two or more frames, showing at least the initiation of the interaction and the reaction to that initiation. An example of an interaction sequence is shown below. (Definitions of the codes are included in section III.)

**Teacher:** John, what is ten plus five plus five?



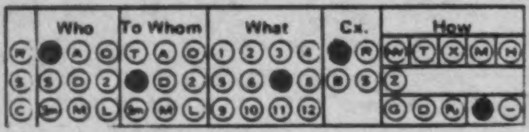
In our shorthand, this sentence is coded TS1i. The teacher (T, Who column) has asked a student (S, To Whom column) a direct question (1, What column) which is instructional (i, Context column).

**John:** Twenty.



Shorthand: ST3i. The student (S, Who column) responds (3, What column) in an instructional context (i, Context column) to the teacher's (T, To Whom column) question.

**Teacher:** Very good, John!



Shorthand: TS7i+. The teacher (T, Who column) acknowledges (7, What column) positively (+, How column) the student's response (S, To Whom column) in an instructional context (i, Context column).

## III. FIVE-MINUTE OBSERVATION CODES

The operational definitions of the Who, To Whom, What, Context, and How codes are in this section. Included under each What, Context and How definition are several typical examples of that code which you might encounter in a classroom. The shorthand code is shown next to the definition.

## A. LIST OF CODES

### Who/To Whom

T - Teacher
A - Aide
0 - Other Adult
S - Student
D - Different Student
2 - Two Students
Sm - Small Group
M - Medium Group
L - Large Group

### How

NV - Non-verbal
T - Touch
X - Movement
M - Material, Object
H - Humor
Z - Personal Experience
G - Guide
D - Demean, Threaten
Pu - Punish
+ - Positive
- - Negative

### What

1 - Direct Question
2 - Open-ended Question
3 - Response
4 - Instruction, Explanation
5 - Request, Command
5G - Open-ended Command
6 - Comment, General Action
7 - Acknowledge, Praise
8 - Support, Encourage
9 - Corrective Feedback
10 - No Response
11 - Reject
12 - Observe, Monitor

### Context

i - Instructional
R - Routine
B - Behavior
S - Social

## B. OPERATIONAL DEFINITIONS

### 1. The Who Column

The Who column indicates who is doing the talking or the action:

| Code | Code Usage |
|---|---|
| T - Teacher | The one person who is ultimately responsible for the every-day conduct of the classroom. |
| A - Aide | Classroom assistants who are regular in their attendance and are assigned a role by the teacher. These assistants may be older students, teachers in training, parents or special topic teachers such as music or art instructors. Guest lecturers who are in the classroom only one time are coded A also. |
| O - Other | Any other adult who is in the classroom, such as a principal. |
| S - Student | When the focus is on an adult, S refers to the individual student with whom the adult is interacting. |
| D - Different Student | Used to show that the object of the interaction has changed from the initial student (S) to another student (D). Specifically to indicate that the original student is not continuing the response but rather that another child has added something to the interaction.<br>*Seldom used for adult focus observations. |
| 2 - Two Children | Both must be the object or initiator of the interaction. |
| Sm - Small Group | 3-6 students. |
| M - Medium Group | 7 - 13 students. |
| L - Large Group | More than 13 students. |

### 2. The To Whom Column

The To Whom column indicates the person or group that is being talked to or interacted with:

| Code | Code Usage |
|---|---|
| T | These codes are all the same as the codes for the Who column |
| A | |
| O | |
| S | |
| D | |
| 2 | |
| Sm | |
| M | |
| L | |

### 3. The What Column

The What column is the verb in the sentence metaphor. It is with these twelve codes that the type of action or behavior of the interaction is identified.

Each interaction frame must have one of the twelve What codes marked in; no more than one of these twelve may be coded in any frame.

The What codes fall into groups. There are three stimulus codes: Command (code 5, 5G), Direct Question (code 1), and Open-ended Question (code 2).

Response (code 3), No Response (code 10) and Reject (code 11) are related codes also. Whenever a response is called for, the next frame should be either a Response (code 3), a No Response (code 10) or a rejection (code 11) in order to complete the interaction.

Acknowledgment (code 7), Praise (code 7+) and Corrective Feedback (code 9) are feedback codes that will frequently be the third part of the interaction sequence. There will often be a stimulus, a response and then feedback. Code 8 (Encouragement) is also a type of feedback code but it is much more general. It is used when the feedback is not related to a stimulus/response sequence.

The Comment (code 6), Instruction (code 4) and stimulus (codes 1, 2, 5, 5G) can also be viewed in relationship to one another. Teachers who lecture or instruct the class in the more traditional way are coded 4. When a discussion is encouraged and the students actively participate, a higher proportion of 6's are recorded, whereas a more directed interaction through the use of questions or commands is indicated by the frequent use of stimulus commands such as 1, 2, and 5.

Observation and Monitoring (code 12) is coded when the teacher is watching the students as they engage in their activities. Codes 4 and 6 when used with NV indicate general non-verbal activity on the part of the focus person.

## The What Column Definitions

(1) Direct question: Code 1 anticipates a specific response or a yes/no answer especially when previously studied material is being reviewed. A direct question will elicit the following responses: statements of preference, statements of fact, classification, and definitions.

| | |
|---|---|
| What is wrong with problem number three? (fact) | TL1i |
| Do you like Antonio in the novel? (preference) | TS1i |
| What is 5 x 3? (fact) | TS1i |
| What is your favorite color? (preference) | TS1i |
| What does "evaporation" mean? (definition) | TS1i |

(2) Open-ended question: Code 2 questions allow space for free expression of ideas or feelings and invite opinions. Code 2 questions encourage responses that require interpretation of ideas, cause and effect relationships, comparisons, reasoning, concept-realization, description of a process, definition of abstract concepts, and open-ended preferences.

| | |
|---|---|
| What do you feel like doing now?(open-ended preference) | TS2i |
| How do you feel about Antonio in the novel? (interpretation of ideas) | TL2i |
| Where do you think turtles live? (reasoning) | TS2i |
| What does "sin" mean to you? (abstract concept) | TL2i |
| If you placed the clay in the sun, what do you think would happen? (cause/effect) | TS2i |

(3) Response: Code 3 is a response (verbal or non-verbal) to a command (code 5, 5G) to a question (codes 1, 2), or to a correction (code 9). Do not automatically code 3 after a question. If a student refuses, code 11. If she/he does not respond, code 10. If she/he responds with an unrelated statement, code 6.

| | |
|---|---|
| Student answers the teacher's question. | ST3i |
| Student stops combing her hair when requested. | ST3BNV |
| T: "Take your books out." | TL5R |
| L: Class does | LT3RNV |
| T: "What is the answer to question four?" | TS1i |
| S: "I don't know." | ST3i |

(4) Instruction/Explanation: Code 4 is used when an adult or student is:

(a) Verbally giving information to others which might include reviewing lessons, lecturing on new material, giving directions and assignments, explaining rules of behavior, and reading.

(b) Non-verbally engaged in demonstration which might include game playing, working on a math problem, or demonstrating how equipment works. When an interaction involves basic skills such as reading, writing, spelling, and math, code 4 is used with "i" in the Context column. Routines that are only indirectly tied to the task, such as passing out materials or picking up papers, are coded 4 "R."

| | |
|---|---|
| There is a game called "Community People." You play by matching the pictures on your card with those on the large card. (directions) | TL4i |
| You have to add 3 and 7 here and carry the 1 over to this column. (instruction) | TS4i |
| When we go to the courtroom, I would like you to listen quietly and take notes on your responses to the proceedings. (directions) | TL4R |
| Teacher is passing out papers to students. | TL4RNV |
| For the next 2 days I want you to keep a list of all the stereotypes that you hear. (assignment) | TL4R |

(5) Command/Request: Code 5 is a direction which calls for a response free of argument. There is one expected response to be carried out verbally or non-verbally. Grammatically this is often in the imperative form.

| | |
|---|---|
| P. E. Teacher blows the whistle for students to line up. | TL5RNV |
| Student calls teacher's name. | ST5i |
| It is your turn to read, Yolanda. | TS5i |
| Please shut the door. | TS5R |
| Do not leave the classroom until I dismiss you. | TL5R |

(5G) Open-ended command: Code 5G incorporates both the command form (as in code 5) with the concept of the open-ended question (code 2). It is used when an adult or student is attempting to encourage a thoughtful, imaginative response and is posing the problem by issuing a command.

| | |
|---|---|
| Tell me how you feel abour Pres. Carter's energy program. | TS5iG |
| Discuss how the use of fantasy in Alice in Wonderland differs from the use of fantasy in The Hobbitt. | TL5iG |
| Tell the person next to you what friendship means to you. | TL5iG |

(6) Task-related comments/Social comments: The 6 code is used to indicate the use of comments that are part of the interaction but are neither directive nor particularly instructive, rather the 6 expresses opinions or general views or observations. Code 6 is used with "i" (6i) to refer to statements about the instructional activity at hand in which students and/or adults are involved. These would be task-related comments. Code 6 used with "S" (6S) refers to social comments: greetings, personal compliments, non-task related comments, irrelevant remarks.

When a question is asked (code 1 or 2), the initial response is coded 3 and any additional responses (from different students) or extended responses (from the same student) to that initial question are coded 6. This is a distinct use of the 6.

| | |
|---|---|
| Teacher leaves the room. | TT6RNVX |
| That's a beautiful shirt you have on! | TS6S+ |
| Good morning, class. | TL6S |

| | |
|---|---|
| The author is really being difficult here. | TL6i |

Teacher is conducting a show-and-tell period:

| | | |
|---|---|---|
| Teacher: | "What did you do over the weekend?" | TS1iZ |
| Andy: | "I went to the zoo with my daddy." | ST3iZ |
| Cindy: | "The tigers are really big." | DT6iZ |
| Andy: | "The elephants are bigger." | ST6iZ |

Three children and a teacher are working with metal washers and a balance:

| | | |
|---|---|---|
| S: | "I think three big washers will balance four small ones." | ST6iM |
| T: | "I'll try it." | TS6iM |
| T: | "I sure do like your cowboy boots." | TS6S |
| S: | "It balanced." | ST6iM |

(7) Acknowledge: Code 7 is an indication that a response, product, or behavior is recognized or agreed with. Some form of recognition or feedback for the specific response must be evidenced for 7 to be recorded. The feedback may be a simple yes to indicate the response was correct or the repetition of the actual response. The 7 must, however, only follow a 3 (response).

Code 7 is used with i in the Context column to indicate acknowledgement of a response having to do with instructional subject matter (see definition of instructional on page 19). Code 7 is used with B in the Context column to indicate acknowledgement of a response having to do with behavior ( see definition of behavior on page 19).

| | |
|---|---|
| Please sit down | TL9B |
| Students sit down | LT3BNVX |
| Thank you for sitting down when I asked you. | TL7B |

| | | |
|---|---|---|
| T: | What do you think is in the bag, Peter? | TS2iM |
| S: | I think it's a carrot. | ST3iM |
| T: | You think it's a carrot. | TS7iM |

Code 7 is also used for praise of a response, product, or behavior. Praise is different from acknowledgement only in that it is very positive. For that reason, acknowledgement coded with a + for positive in the How column will indicate praise or enthusiastic acknowledgement.

| | |
|---|---|
| A carrot, you sure are smart! | TS7i+ |
| Very good Billy, right again. | TS7i+ |
| That was very nice! | TS7S+ |

(8) Support/Encourage: Code 8 is used when a statement is made that is intended to encourage a student to continue trying or to not let momentary difficulties discourage her or him. Another use of the 8 is to code statements of praise, support and/or general acknowledgment when not tied to a specific response. The difference between the 7 and the 8 is that the 7 is feedback that is specific to a solicited response, whereas the 8 is more general or is a recognition of general comments or of past deeds.

Code 8 can also be used to record statements of affection and comforting remarks; this would normally be coded with S in the Context column (The 8S is special in that it deals with feelings.) The teacher's recognition of the feelings of a student can take any grammatical form (statement, question, command).

| | | |
|---|---|---|
| Teacher: | Tell me- how do you like history? | TS1i |
| Student: | I like it. | ST3i |
| Sally: | I don't like it. | DT6i |
| Teacher: | You don't like it. | TS8i |

| | |
|---|---|
| I'm really proud of you, class, for behaving so well while Mr. Jones was here. | TL8B |
| Teacher holds child while child is crying. | TS8SNVT |
| Teacher returns corrected homework and states, "Don't worry about your results. This is new work and I didn't expect anyone to get them all right." | TL8i |

| | |
|---|---|
| Do you feel that people don't understand? | TS8S |
| Tell me how you feel today. (Teacher noticing student looks unhappy.) | TS8S |
| That's a good idea. | TS8i |

Note that 7 is used to acknowledge a specific response to a project and is immediate, while 8 is more general and encouraging or is delayed acknowledgment or praise.

(9) Corrective feedback: Corrective feedback is the attempt to change or modify a response, product, or behavior. Code 9 is used when the subject of the observation tries to change another's behavior or corrects her/his answers or work. As with Code 8S (support, encourage), Code 9 (corrective feedback) can come in three different grammatical forms (statement, question, command). "Don't do it that way" and "Can you think of a better way to do it" are both examples of 9's.

Codes G, D, and Pu from the How column are designed specifically for use with code 9 to show the method used to effect behavior modification (see these and other How column definitions on pages 20-24.)

Code 9 is used with i in the Context column to indicate corrective feedback in instructional areas and with B in the Context column to indicate corrective feedback having to do with classroom behavior.

| | |
|---|---|
| Teacher blows whistle when two students are fighting. (command). | T29BNV |
| Don't throw your ball against the wall; come and play on the swing. (command) | TS9B |
| You'll have to stay in at recess if you continue to talk. (statement/threat) | TS9BD |
| Are you sure Sacramento is the capital of New Mexico? (question) | TS9iG |

| | |
|---|---|
| Calling someone's name to correct behavior. (command) | TS9B |
| The answer to that math problem is wrong. (statement) | TS9i |
| Do you think your conversation is more important than understanding the problem? (question) | T29B |

(10) No response: Code 10 is used for no response when a response is called for and none is forthcoming to complete the interaction, assuming that time is allowed. (NV is not coded with 10 because 10 is by definition non-verbal.)

| | |
|---|---|
| S: Teacher, may I answer the question next? | ST1i |
| T: Teacher does not reply. | TS10i |
| T: Jimmy, let Johnny play with you | TS9B |
| S: Jimmy does not look up or answer. | ST10B |

(11) Rejects/Refuses: Code 11 is used for all noncompliant responses which are visibly negative or rejecting: an adult rejects a student's request or demand for attention, a student says "No" or "I won't" to an adult. Code 11 should not be confused with code 3 (response). Code 11 is a distinct unwillingness to answer a question or cooperate with a request. Rejection is generally verbal but may also be non-verbal. The non-verbal behavior must be very clear. Code 11 (like code 9) can also use the G from the How column to indicate that the respondent is giving a reason for the refusal.

| | |
|---|---|
| (Teacher is preparing for lunch time). | |
| Student pulls teacher by the arm to show teacher something. | ST5RNVT |
| Teacher says, "Mary, I am busy now." | TS11RG |
| Child says no when asked to put away toys. | ST11R |
| The child pushes away a book that is being offered. | ST11iNV |

(12) Observing/Monitoring: Code 12 is used when an adult is listening to or observing others. All modifiers coded in the How column with code 12 refer to or describe the person(s) in the To Whom column. The exception is the movement code (X) which refers to person in the "Who" column. Therefore, code 12 is different from all other codes in that what is being observed is being coded. All codes from the Context column and the How column (except for X) refer to the activity being monitored.

| | |
|---|---|
| Teacher watches child swinging happily. | TS12S+NV |
| Teacher monitors the students doing science experiment. | TL12iNVM |
| Teacher walks around room watching students take test. | TL12iNVX |

## 4. The Context Column

The Context column identifies the topic or type of interaction. It places the interaction frame into a context of instructional relevancy. The Context codes can be seen as the object of the preposition "about." For example, the teacher (T) responds (3) to the student (S) about his behavior. Simply stated, the four codes define the action or behavior as having to do with either:

Subject matter (i for instructional)

Cleanup or preparation (R for routine)

Behavior or misbehavior (B for behavior)

Social, non-subject related affairs (S for social)

These distinctions are essential since they allow the staff analysts to divide the interactions into instructional or non-instructional content. Lecturing (4) codes, for example, can be given a more precise context by indicating whether the lecturing is about instructional content or behavior. The context code will, therefore, indicate the number of frames spent on each of the four areas. Only one code is used for each frame and each frame must have one of the four codes marked.

## The Context Column Definitions

(i) Instructional: When the action or behavior is part of the instructional subject, code i in the Context column. Instructional subject is defined as being the teacher-designated learning activity. At the lower grade levels, this definition will normally encompass a wider range of activities within a given time period than at the higher grade levels. Examples of instructional subjects could include math, arts and crafts, social studies, and lessons on telling time.

| | |
|---|---|
| S: "How do you spell antidisestablishmentarianism?" | STIi |
| T: "Look it up in the dictionary." | TS5i |
| T: "What impressed you most about your field trip to District Court?" | TL2i |
| S: "The rituals involved." | ST3i |
| T: "Will you do the next problem, Robert?" | TSIi |
| S: Robert walks to the blackboard | ST3iNVX |

(B) Behavior: Recorded with interactions that have to do with commentaries on behavior or misbehavior; this code is clearly concerned with deportment or conduct.

| | |
|---|---|
| T: "John please sit down and stop disturbing Ellen." | TS9B |
| S: John sits down. | ST3BNVX |
| T: "That's better." | TS7B |
| T: "Class, you were very quiet in the auditorium today. Thank you." | TL8B+ |

(R) Routine: Classroom management actions that are related to the instructional activity, but are not actually instructive. Preparation and cleanup are coded in this column. The use of R indicates that this is time taken away from instructional activity.

| | |
|---|---|
| Teacher is walking around the room passing out test materials. | TL4RNVX |
| Can I go to the bathroom? | STIR |
| Put the paste cover on tight | TS5R |
| Where should I put the books? | STIR |

T: "Bring your paper up so I can check it." TS5R
S: Brings paper to teacher. ST3RNVX

(S) Social: The social code refers to interactions that are identified as irrelevant to the subject matter and behavior. The S is often used for the everyday courtesies and chitchat that people exchange. S is also used to show a content change in subject matter when the class and/or teacher strays from the designated classroom material. Therefore, at the upper grade levels, if in a math class the students begin a discussion on ecology, the context would be S.

T: "What lovely embroidery on your pants!" TS6S+
S: "Thank you! I think so, too." ST6S+
S: "Did you see the game last night?" STIS

## 5. The How Column

The codes in the How column may be used in conjunction with the four columns that precede it. These codes are supplementary and are used when a specific interaction requires more descriptive commentary. Generally, as many codes as necessary to describe the interaction can be used from this column. However, the G, D and Pu codes are mutally exclusive as are the positive and negative codes.

### The How Column Definitions

(NV) Non-verbal: When an interaction occurs and there is no verbal exchange, NV is used with the appropriate What code. NV is not used with 10 because 10 by definition is non-verbal.

T: "Shut the door, Emily." TS5R
S: Emily gets up and closes the door ST3RNVX

T: "How many of you have finished the problem?" TLIi
L: The students raise their hands. LT3iNV

(T) Touch: Touch is used to identify those persons that relate with physical expression. For example, the teacher may touch a child on the shoulder while explaining a lesson or may hug a child that has been hurt. This code is likely to be more commonly used in elementary school. Touch can also be used to identify negative physical interaction. T is not recorded to indicate accidental bumps or the touching of materials.

| | |
|---|---|
| "I want you to sit over there."<br>(The child is grabbed and placed in a seat.) | TS9BTPu |
| Teacher holding a child that is crying. | TS8SNVT |

(X) Movement: X is coded when there is total body movement, such as walking around the room or demonstrating a dance step. X is not used to record hand gestures or slight shifts of position.

| | |
|---|---|
| T: "Ginger, please erase the blackboards." | TS5R |
| S: Ginger walks over to the blackboard. | ST3RNVX |
| T: "This is how you swing the racket."<br>(Demonstrates) | TL4iXM |

(M) The M is used with i since it designates the use of concrete objects to make the subject of the instruction less abstract and more real. Therefore, when a teacher uses a flower to demonstrate the parts of a plant, this is coded M with i. Manipulative objects, such as games or puzzles, that are tied to the instruction are are coded M. The M is also coded when the class utilizes any of the materials that are essential to the mastery of a particular task: typewriters in a typing class and paints during a painting session. Books, magazines, A-V equipment, teaching machines, overhead projectors and chalkboards are not coded M.

(H) Humor: Teacher or student attempts (successfully or otherwise) to promote laughter. Hearty chuckles may not be the result, yet an atmosphere of warmth, and good will may be apparent. Humor can also be employed with sarcasm. In that case it would be coded H with -.

(Z) Life experience/Personal experience: The sharing of a personal experience by either teacher or student, when it contributes to the instructional material, is coded Z. Z is only coded with i. A student casually remarking that his grandmother came to visit would not be coded Z. It would be ST6S. If the student discusses what his grandmother said about aging in conjunction with a unit on the psychology of the family, then the code would be ST6iZ. In a unit on law, if the teacher shares her experience about a legal case in which she was involved, this would be coded TL4iZ. When Z is coded with a teacher's question, the question has to do with the student's life experience.

(G) Guide to alternative: G is coded with 9 when corrective feedback is presented in a positive manner and is designed to make the student understand why she/

he may be doing something wrong (behaviorally and/or in a task). Whether it is presented as a guide, a reason, or a question, the delivery is positive and it stimulates understanding. G is coded with 11 when the refusal is combined with a reason for that refusal.

| | |
|---|---|
| Are you sure that's the right answer? | TS9iG |
| Try turning it around and see what happens | TS9iG |
| Sit down so others can see, Gerald. | TS9BG |
| If you knock that over, it will make Jim angry, so please build your own tower. | TS9BG |
| If you pronounce the "c" like a "k," you'll recognize that word. | TS9iG |
| I'm not going to help you because I want you to understand the problem yourself. | TS11iG |

(D) Demean: Code D is reserved for use with code 9 (corrective feedback) when the teacher threatens, insults, or puts down (attempts to embarrass) the person who is being corrected.

| | |
|---|---|
| If you don't quiet down, we are not going to recess. | TL9BD |
| (Sarcastically) If you would use you head once in a while, you might get it. | TS9iD |
| Why are you acting so stupid? | TS9BD |

(Pu) Punish: Punish covers a range of adult disciplinary or behavior-modifying techniques, including withholding of privileges, isolation of a child, or physical punishment (coded with T). Pu is coded only with code 9.

| | |
|---|---|
| Angela, go over to the corner and sit there until we're through. | TS9BPu |
| Okay, Fred, no recess for you! | TS9BPu |
| Teacher spanks child for disruptive behavior. | TS9BNVPuT- |

(+) and (-) Positive and Negative: These two codes are measures of the affective atmosphere (ambience) of the classroom. They index the enthusiasm or negativism of the teacher/student interaction.

(+) Positive is reserved for use when the enthusiasm is overt.

Examples of positive affect include:

| | |
|---|---|
| I love this subject. | ST6i+ |
| You did a very good job. | TS7i+ |
| Wow! (In the middle of instruction) | ST6i+ |
| Laughter. (When the teacher tripped). | LT6SNV+ |
| You behaved great on the field trip this morning. | TL8B+ |

(-) Negative is at the opposite end of the positive emotional spectrum in the classroom. This includes teacher anger, child sadness, and general recalcitrance or reluctance to respond even though there is a response.

| | |
|---|---|
| That's a stupid thing to do. (angry) | TS9iD- |
| I want you all to stop talking, now! (yelling) | TL9B- |
| T: "Go sit in the corner." | TS9BPu |
| S: Student does as told while crying. | ST3BNV-X |

## C. MEMORIZATION EXERCISES

### WHO/TO WHOM COLUMNS

Write the code name after its code letter.

T = ______________________________

A = ______________________________

O = ______________________________

S = ______________________________

D = ______________________________

2 = ______________________________

Sm = ______________________________

M = ______________________________

L = ______________________________

## WHAT COLUMN

Write the code name after its code number.

1 = ____________________

2 = ____________________

3 = ____________________

4 = ____________________

5 = ____________________

5G= ____________________

6= ____________________

7= ____________________

8= ____________________

9= ____________________

10= ____________________

11= ____________________

12= ____________________

## HOW COLUMN

Write the code name after its code letter or symbol.

NV = ______________________________

T = ______________________________

X = ______________________________

M = ______________________________

H = ____________________ ____________

Z = ______________________________

G =

D = ______________________________

Pu = ______________________________

+ = ______________________________

- = ______________________________

## WHAT COLUMN

Write the code number after its code name.

Command = ____________________

Direct Question = ____________________

Response = ____________________

Corrective Feedback = ____________________

Acknowledge = ____________________

Open-ended Question = ____________________

Instruction, Explanation = ____________________

No Response = ____________________

Comment = ____________________

Reject = ____________________

Observe = ____________________

Support, Encourage = ____________________

Open-ended Command = ____________________

## D. HOME TRAINING EXAM

Complete the Home Training Exam to the best of your ability. Don't be distressed if an item seems very difficult for you; the Exam is meant to serve as an assessment of the Home Training Kit as well as of the observer trainee. This is an open book test.

### Part I

For each of the short code sequences listed below, write your own (original) example.

A. 1. Direct Question
   2. Response
   3. Praise

B. 1. Open-ended Question
   2. Response
   3. Acknowledgement

C. 1. Command
   2. Response
   3. Corrective Feedback

D. 1. Open-ended Command
   2. Non-verbal Response
   3. Corrective Feedback in the form of a question.

### Part II

Code the following short exercise; the teacher is with a small group.

1. Mrs. Roland: Janet, what is five minus four?

|  | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | W T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 |  | G D ~ + – |

2. Janet: Nine

|  | Who | To Whom | What | Cx. | How |
|---|---|---|---|---|---|
| R | T A O | T A O | 1 2 3 4 | I R | W T X M H |
| S | S D 2 | S D 2 | 5 6 7 8 | B S | Z |
| C | Sm M L | Sm M L | 9 10 11 12 |  | G D ~ + – |

Home Training Exam (cont'd)

3. Mrs. Roland: No, Janet.

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

4. Janet: I mean, one.

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

5. Mrs. Roland: Very good, dear.

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

6. Janet: I got minus mixed up with plus.

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sn | M | L | Sn | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

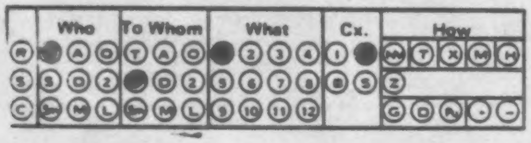
## IV. HOME TRAINING EXERCISES

On the following pages are the Home Training Exercises. They are intended to be completed in the order in which they are presented.

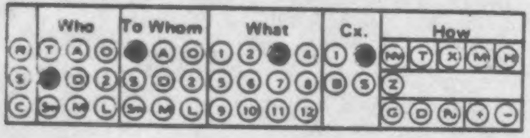
Most exercises consist of a series of interactions which you might find in the classroom. Underneath each interaction, there is an interaction frame taken from the coding booklets you will be using in the actual observation. For each interaction, fill out the frame to the best of your ability. This is a learning device and you are encouraged to refer to the definitions as you do these. On the following exercises there is a feedback sheet. These sheets contain an interaction frame correctly filled out for each frame you filled out in the exercise; there is also a brief explanation to tell you why the frame was completed that way. If you still do not understand why the frame was completed that way, go back to the definitions. Here is an example of the exercise and feedback frames:

Exercise

T: What is your name, child?



S: Julia



Feedback

This is coded TSIR. The teacher (T) has asked the student (S) a Direct Question(1), asking for recall of material already understood. The R is included to show that the question is routine.

The second frame is coded ST3R. The student (S) has responded (3) to the teacher (T) about a routine (R) administrative aspect of the school procedure.

## HOME TRAINING EXERCISE #1

1. Teacher: Johnny, what is two minus one?

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

2. Student: Two minus one is one.

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

3. T: What is three minus one?

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

4. S: Two.

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

5. T: And what is four minus one?

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

6. S: Three.

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

7. T: Tell me what five minus one is.

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

8. S: Four.

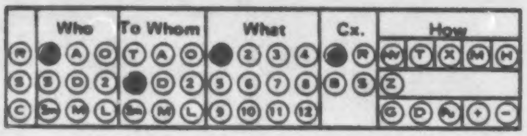
| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

9. T: Correct.

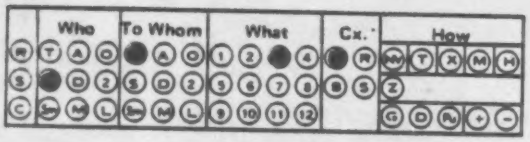
| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | 2 | S | D | 2 | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

**Feedback: Home Training Exercise #1**

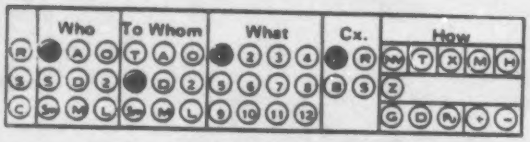
Exercise #1 illustrates two basic interaction sequences: question --- response and question --- response --- feedback.



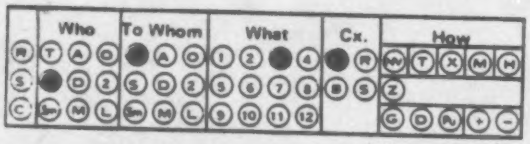
1.) TSli. The Teacher (T) has asked the Student (S) a Direct Question (1) about Instructional material (i). The question calls specifically for recall of facts which are related to basic computation skills.



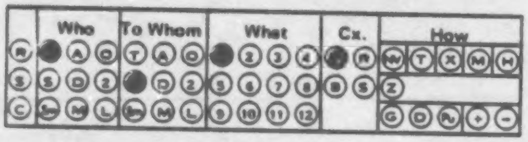
2.) ST3i. The Student's (S) Response (3) to the Teacher (T) is in the instructional context (i). This is a reaction to her question.



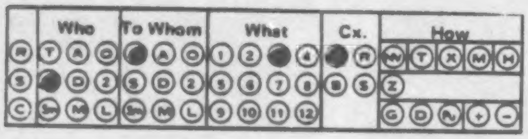
3.) TSli. (See explanation, frame 1, this exercise)



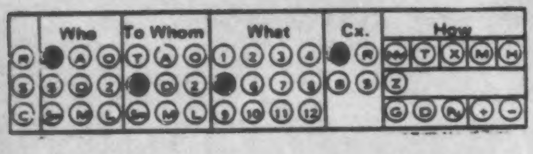
4.) ST3i. (See explanation, frame 2, this exercise)



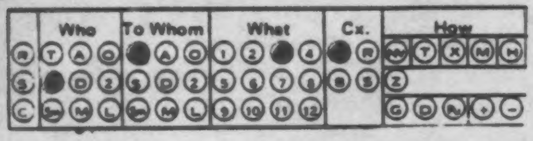
5.) TSli. (See explanation, frame 1, this exercise)



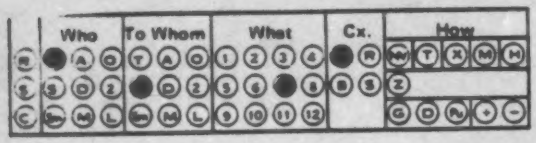
6.) ST3i. (See explanation, frame 2, this exercise)



7.) TS5i. The Teacher (T) Requests (in command form) (5) instructional (i) information of the student (S). This is not in question form.



8.) ST3i. (See explanation, frame 2, this exercise)

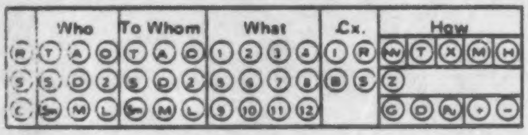


9.) TS7i. The Teacher (T) acknowledges (7) the Student's (S)
response regarding the instructional information (i). Here acknowledgement is simply informing the child his answer is correct.

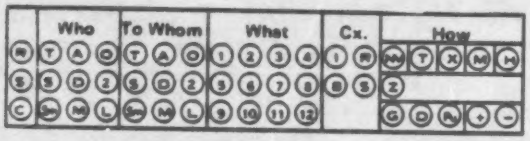
## HOME TRAINING EXERCISE #2

**Situation:** Teacher tutoring one student in math

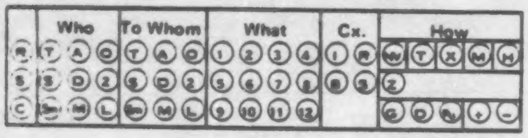
1. Miss Owens: Open your book to page forty-seven.



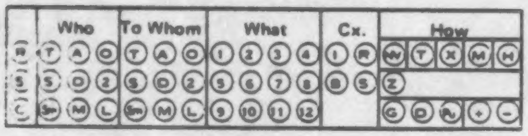
2. Ronald opens his math book to page forty-seven.



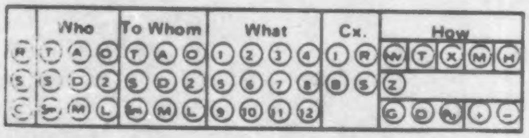
3. Miss Owens: What is three plus one?



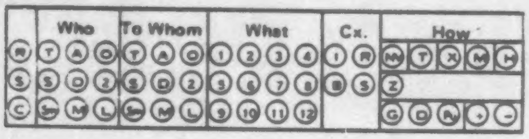
4. Ronald: Three plus one is four.



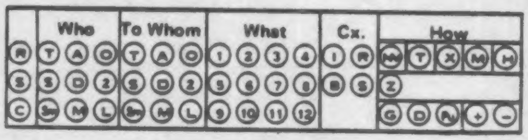
5. Miss Owens: Correct.



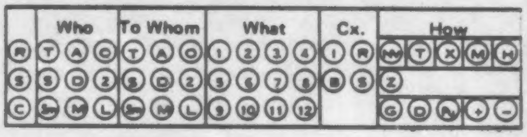
6. Miss Owens: What is four plus five?



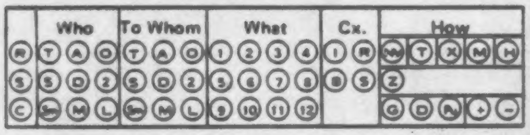
7. Ronald: Four plus five is nine.



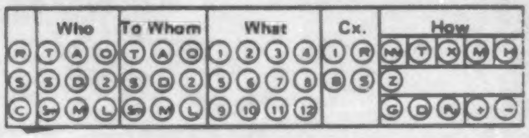
8. Miss Owens: Very good, Ronald.



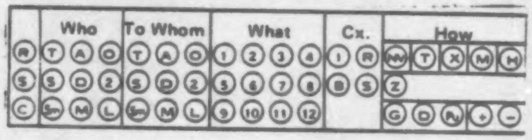
9. Miss Owens: With these blocks, find out what ten plus ten would be.



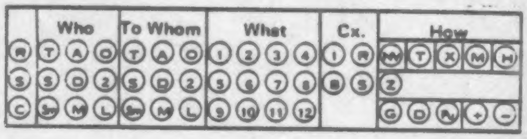
10. Ronald takes blocks and begins working on the problem.



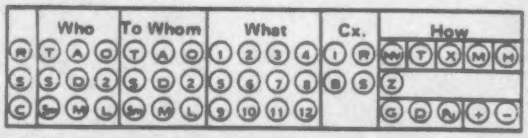
11. Ronald continues working with the blocks while the teacher watches.



12. Ronald: Is the answer twenty?

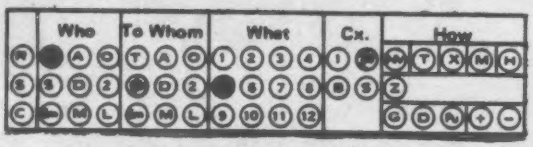


13. Miss Owens: Yes -- very good, Ronald!

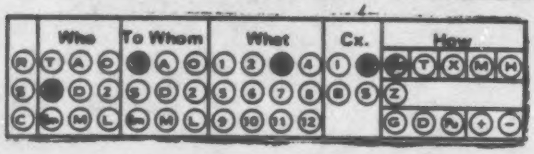


(Exercise #2 cont'd)

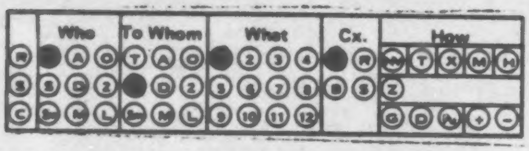
**Feedback: Home Training Exercise #2**



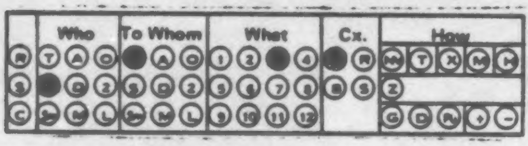
1.) TS5R The Teacher (T) Requests(in the command form) (5) the Student (S) to open his book with regard to the routine matters (R).



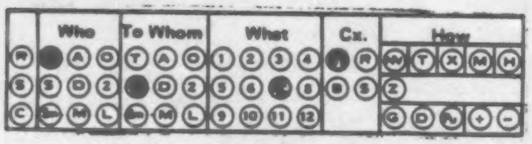
2.) ST3RNV The Student (S) Responds (3) to the Teacher's (T) Request Non-verbally (NV) regarding routine matters (R).



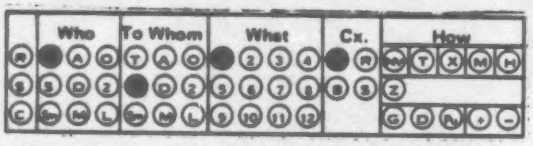
3.) TS1i The Teacher (T) asks a Direct Question (1) to the Student(S) for recall of instructional (i) facts already learned.



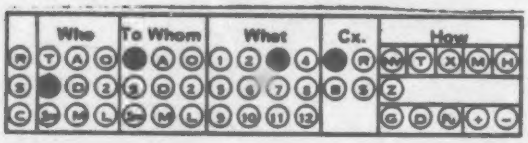
4.) ST3i The Student (S) Responds (3) to the Teacher (T) within the instructional context (i). Because by definition a Response (3) directly answers a question, the Response to an instructional question would be placed in the instructional context.



5.) TS7i The Teacher (T) Acknowledges (7) the Student's (S) response to the instructional material (i) by telling him his answer was correct.

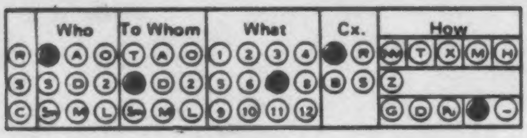


6.) TS1i The Teacher (T) asks the Student(S) another Instructional (i) Direct Question(1) which elicits a rote reply.

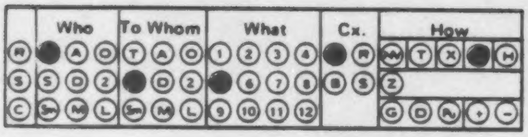


7.) ST3i The Student (S) Responds (3) to the Teacher's (T) Instructional question (i)

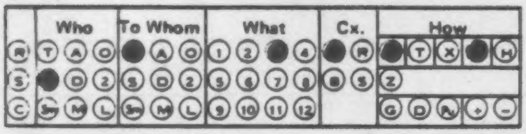
## Feedback: Home Training Exercise #2 cont'd



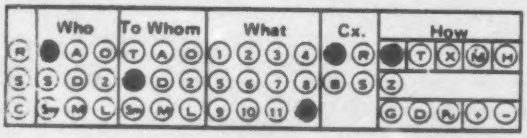
8.) TS7i+ The Teacher (T) Praises (7+) the Student's (S) Instructional (i) answer. Feedback for Instructional work or responses is, of course, also coded Instructional (i). Note difference between this Praise and number 5's Acknowledgement (above). Here, the teacher not only lets the student know his answer is correct but goes further to compliment his task performance.



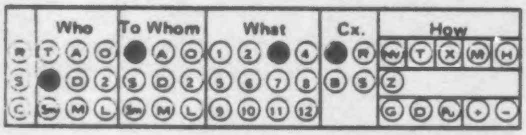
9.) TS5iM The Teacher (T) now tells (5) the Student (S) to attempt an instructional task (i) using concrete materials (M)



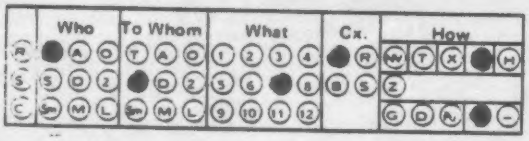
10.) ST3iNVM The Student (S) Responds (3) to the Teacher's (T) command Non-verbally (NV) by beginning to work out the Instructional (i) problem using the Materials (M).



11.) TS12iNVM The Teacher (T) observes (12) the Student (S) Non-verbally (NV) working on a task (i) using materials (M).



12. ST3iM The Student (S) Responds (3) to the Teacher's (T) request. The content is still instructional. Note that the response is in question form to indicate his tentative feeling but it is his answer.



13. TS7i+M The Teacher (T) praises (7+) the student's (S) Instructional (i) answer. Note the M is coded throughout the sequence.

## HOME TRAINING EXERCISE #3

**Situation:** Teacher and small group of children.

1. Teacher: I'm going to read a story to you now.

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | Z | S | D | Z | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

2. Teacher: Sit down very quietly in a circle.

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | Z | S | D | Z | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

3. All the children sit down quietly.

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | Z | S | D | Z | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

4. Teacher: That was very nice, thank you.

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | Z | S | D | Z | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

5. Teacher: "Once there was an old man who had hundreds of cats. He lived in a little house in the country."

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | Z | S | D | Z | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

6. Teacher: "There were cats on the chairs and the bed and in the windows."

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | Z | S | D | Z | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

7. Ann hits another child, Jonathon. (Teacher watches)

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | Z | S | D | Z | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

8. Teacher: Leave Jonathon alone! (Angry)

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | Z | S | D | Z | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

9. Ann sits down quietly, complying with the teacher's wishes.

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | Z | S | D | Z | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

10. Teacher: "There were cats on the roof and cats in the garden. There were cats by the mailbox and cats on the fence."

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | Z | S | D | Z | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

11. Two children begin giggling as teacher pauses (Teacher watches).

| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | Z | S | D | Z | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

12. Teacher: Be quiet so that the other children can listen to the story.

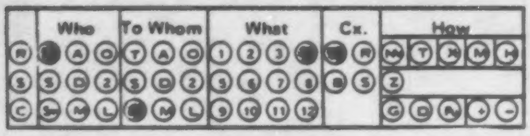
| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | Z | S | D | Z | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

13. The two children stop giggling and prepare to listen.

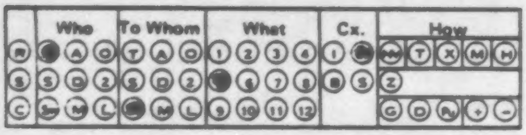
| | Who | | | To Whom | | | What | | | | Cx. | | How | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | T | A | O | T | A | O | 1 | 2 | 3 | 4 | I | R | W | T | X | M | H |
| S | S | D | Z | S | D | Z | 5 | 6 | 7 | 8 | B | S | Z | | | | |
| C | Sm | M | L | Sm | M | L | 9 | 10 | 11 | 12 | | | G | D | N | + | − |

Exercise #3 cont'd

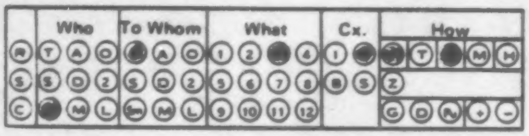
Feedback: Home Training Exercise #3



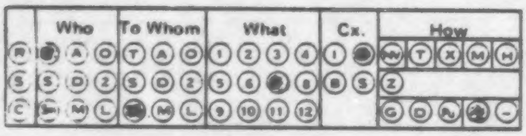
1.) TSm4i The Teacher (T) is introducing (4) to the Small Group (Sm) instructional material (i)



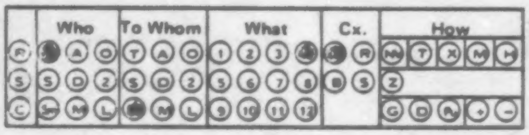
2.) TSm5R The Teacher (T) has given the Small Group (Sm) a Routine (R) Command (5).



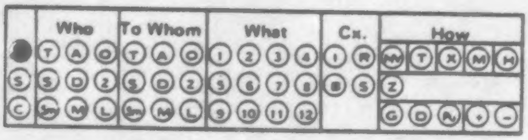
3.) SmT3RNVX The Small Group (Sm) Responds (3) Non-verbally (NV) to the Teacher's (T) command regarding Routine (R) with Movement (X).



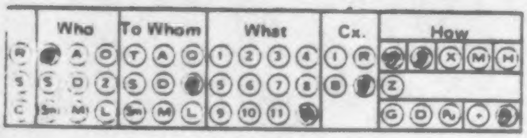
4.) TSm7R+ The Teacher (T) Praises (7+) the Small Group (Sm) regarding routine matters (R).



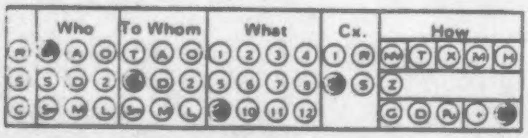
5.) TSm4i The Teacher (T) begins reading (4) to the Small Group (Sm), which is considered Instruction (i).



6.) Ⓡ The Teacher continues reading, so this frame is coded Repeat (R). No other bubble is filled in when Repeat is coded.

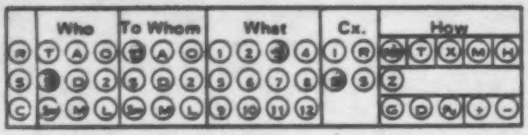


7.) T212SNVT- The Teacher (T) observes (12) Two Students (2) fighting (-) and touching (T) without exchanging words (NV) in a social context (S).

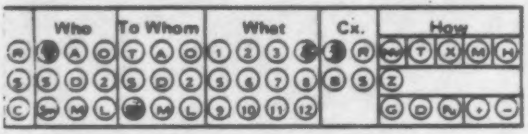


8.) TS9B- The Teacher (T) Corrects (9) one Student's (S) Behavior (B) with Negative Affect (-).

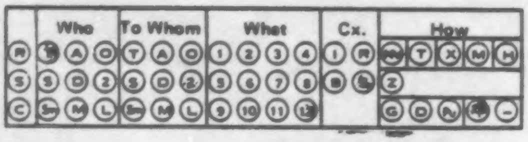
## Feedback: Home Training Exercises #3 cont'd



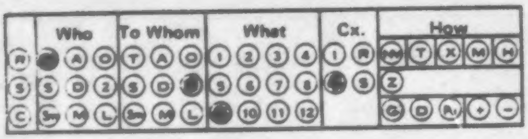
9.) ST3BNV The Student (S) Responds (3) Non-verbally (NV) to the Teacher's (T) Behavioral (B) correction.



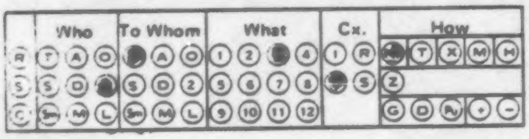
10.) TSm4i The Teacher (T) resumes reading (4i, see frame 5 above) to the Small Group (Sm).



11.) T212SNV+ The Teacher (T) stops and Observes (12) Two Children (2) giggling (+) in a Social context (S).



12.) T29BG The Teacher (T) Corrects (9) the Two Students' (2) Behavior (B) by giving them a Reason (G).



13.) 2T3BNV The Two Students (2) Respond (3) Non-verbally (NV) to the teacher's (T) correction of their Behavior (B).

# APPENDIX C

## Observers Manual: Section II

# OBSERVER'S MANUAL

## ELEMENTARY AND SECONDARY SCHOOL OBSERVATION INSTRUMENT

(AN ADAPTATION OF STANFORD RESEARCH INSTITUTE OBSERVATION INSTRUMENT)

## SECTION II

## OVERVIEW

## PHYSICAL ENVIRONMENT, SNAPSHOT AND DAILY SUMMARY

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## OVERVIEW

The |I|D|E|A| Observation Instrument (adapted from the Stanford Research Institute Observation Instrument) provides a unique, integrative picture of the classroom in its totality. This instrument allows the observer to summarize the physical environment, catalogue the activities that occur, and record the interaction between adults and students.

The Classroom Observation Instrument consists of six sections: Identification Information, Physical Environment Inventory (PEI), Classroom Snapshot (CS), Preamble, Five-Minute Interaction (FMI) and Daily Summary. Each section is essential and will, in the final analysis, furnish a comprehensive view of the classroom. Consequently, all aspects of the Observation Instrument must be thoroughly understood for accurate observation.

Section I of the Observer's Manual details the Five-Minute Interaction and should be referred to for a precise explanation of that aspect of the Observation Instrument. Section II of the Observer's Manual describes the Identification Information, the Physical Environment Inventory, the Snapshot, and the Daily Summary. The two sections of the Manual are separated so that the observer has an opportunity to thoroughly integrate each portion with a minimum of difficulty.

## II. EXPLANATION OF CODING PROCEDURES

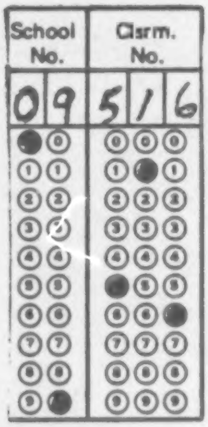
Information coded on the |I|D|E|A| Observation Instrument is recorded in bubbles or circles so that it can be optically scanned. Coding must be done with #2 pencils. The center of each bubble must be filled in or the optical scanner will not read the mark. If marks are made outside the outline of the bubble, the scanner will misread the information.

### A. IDENTIFICATION INFORMATION

The Identification Information section is found on the first page of the Observation Instrument. The coding of each grid or section is explained in the following paragraphs.

### 1. School Number and Classroom Number

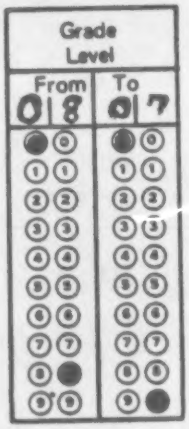
Each school and each classroom has an identification number which is assigned by |I|D|E|A|. Remember that the classroom number is NOT the number on the door! These numbers are handwritten into the spaces provided and then coded into the appropriate bubbles. These numbers must be recorded accurately as the booklets will be separated and scanned according to this identification.



In the example shown above the hypothetical school number is 09. Therefore, the top row shows the handwritten zero and nine while the darkened bubble directly below corresponds directly with that handwritten number. Classroom No. 516 is coded the same way.

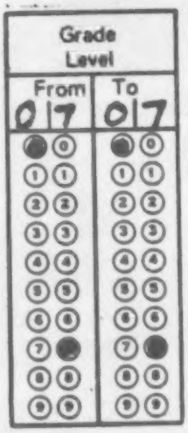
2. Grade Level

If the class includes more than one grade level, code the lowest grade in the From column and the highest grade in the To column. For a class in which all students are at the same grade level, code the same grade level in both columns.



Grade Level

| From | To |
|---|---|
| 0 8 | 0 7 |

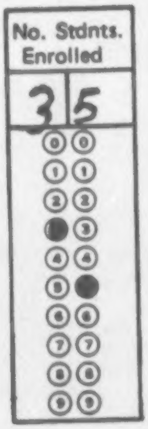


Grade Level

| From | To |
|---|---|
| 0 7 | 0 7 |

3. Number of Students Enrolled

The number of students enrolled is defined as the number of students who are officially registered in a particular adult's classroom, not the number in the classroom on a given day. The example below shows that 35 children are enrolled in the class.



No. Stdnts. Enrolled

3 5

## 4. Period Number and Subject Area

This code is used only when observing in a classroom at a secondary school. The school day is divided into time blocks which are referred to as periods and which run numerically throughout the day.

| SECONDARY ONLY | |
|---|---|
| Per. No. | Subject Area |
| ● | ① English |
| ② | ② Mathematics |
| ③ | ③ Social Studies |
| ④ | ● Science |
| ⑤ | ⑤ The Arts |
| ⑥ | ⑥ Foreign Language |
| ⑦ | ⑦ Vocational/Career Education |
| ⑧ | ⑧ Physical Education |
| ⑨ | |
| ⑩ | |

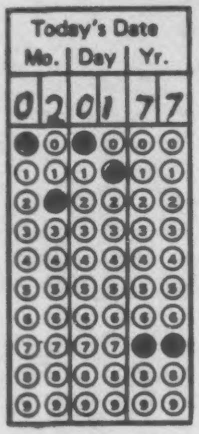
## 5. Scheduled Class Duration

The exact hour that the class is scheduled to begin is coded in the From section, and the time at which it is scheduled to end is coded in the To section. If the class meets later than normal or leaves earlier than usual the regularly scheduled class duration would still be coded. .

| Scheduled Class Duration | | |
|---|---|---|
| From: 8:15 | | |
| Hour | Minute | |
| ⑦ ● ⑨ ⑩ ⑪ ⑫<br>① ② ③ ④ ⑤ | ⓪ ● ②<br>③ ④ ⑤ | ⓪ ① ② ③ ④<br>● ⑥ ⑦ ⑧ ⑨ |
| To: 9:05 | | |
| Hour | Minute | |
| ⑦ ⑧ ● ⑩ ⑪ ⑫<br>① ② ③ ④ ⑤ | ● ① ②<br>③ ④ ⑤ | ⓪ ① ② ③ ④<br>● ⑥ ⑦ ⑧ ⑨ |

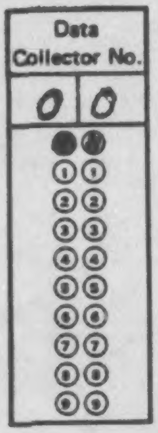
6. Today's Date

In coding the date all six spaces of the grid must be filled in. The correct method for recording February 1, 1977, is 02 01 77. The date is first handwritten in the squares and then coded into the appropriate bubbles.



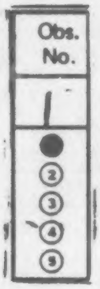
7. Data Collector Number

Each data collector has an identification number. The number is first written in the squares provided and then coded into the appropriate bubbles.



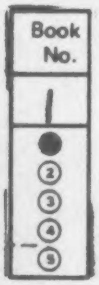
8. Observation Number

Observation will take place over a three day period. Therefore, the day that is being observed (day 1, day 2, day 3) is coded in the appropriate bubble. For example, if it is day one, the first bubble would be marked.



9. Booklet Number

This number is used to identify the order of the booklets used within one classroom during a given day. This code is particularly relevant to the elementary school observation as four booklets are usually coded and this number indicates the sequential order of those booklets. For secondary school there is only one booklet per period; therefore, only the number 1 will be marked when observing in a junior high or high school class.



## 10. Reliability

The reliability bubble is checked only by those observers designated as "floaters" when they are coding in the classroom. The cover page of the floater's Observation Instrument is IDENTICAL to that of the regular coder for that classroom except for the Data Collector No. and the reliability bubble.

○ Reliability

## 11. Number of Teachers that Regularly Work in the Classroom

Fill in the bubble that corresponds to the number of teachers assigned to work (on a regular basis) in the classroom you are observing. A special teacher, such as an art or music teacher is not coded; however, a team teacher is.

⓪①②③④ Number of teachers that regularly work in the classroom

## 12. Number of Aides that Regularly Work in the Classroom

Code the number of aides assigned to work one-half day or more, at least one time per week with the teacher you are observing. An aide must be on salary to be coded in this category.

⓪①②③④ Number of aides that regularly work in the classroom

## 13. Handwritten Identification Section

Write in or print (if your writing is not very clear), the name of the school you are observing, the teacher you are focusing on, the room number (THE NUMBER ASSIGNED BY IDEA), the period number (see class list), the formal or official class title (see class list), and your name. This information is a further means of identifying the data for accurate analysis.

School ______________________________

Teacher ______________________________

Room # ______ Period # ________________

Class Title ______________________________

Data Collector ______________________________

## B. PHYSICAL ENVIRONMENT INVENTORY

The Physical Environment Inventory is divided in to three major categories: space, furniture/furnishings, and equipment and materials. Only those items which apply to the specific classroom being observed are completed.

### A. Space

Code only one of the following five items:

○Open structure
○Open structure with furniture
used to partition
○Multiple rooms with movable
walls used as open structure
○Multiple rooms with movable
walls used as single room
○Single room

1. Open structure

-Open structure refers to an area of space that potentially can accommodate two or more classes and has no well defined partitions. The use of this space is or can be flexible, adaptable and fluid.

-Open structure with furniture/walls used to partition
This space is similar to open space except that distinct divisions are made with furniture and/or movable walls.

-Multiple rooms with movable walls used as open space
This is a traditional structure which has been redesigned to allow for the easy flow of traffic between previously divided classrooms.

-Multiple rooms with movable walls used as a single room
This space looks like the single classroom except that the walls can be moved to open up the space.

-Single room/Recreation area
This is the traditional classroom: walls are immovable and the space is enclosed. Recreation area refers to a playing field, swimming pool or gym.

---

Up to three of the bubbles can be marked. Marking the last bubble, however automatically excludes the three previous items.

○Adjacent patio or outside work space
○Adjacent room for work space, storage, teacher's office
○Room opens into inside common area
○Room without adjacent usable space

2. Adjacent patio or outside work space

-Leading off the classroom is an outside area that is reserved for that particular class and can be utilized by that class for instruction or play.

-Adjacent room for work space, storage, teacher's office

This space is enclosed and leads directly off of the classroom. Work space is an area set aside for students to work either individually or with several other people (for example, a photography lab or a crafts room). A storage area that is used only for storage and has no work space is not coded.

-Room opens into inside common area

The common area is utilized by teachers and students for instructional or recreational purposes. A number of classrooms may lead into this area which allows a variety of teachers and students to be in contact with one another.

-Room without adjacent usable space

---

Optional - Code only one item if appropriate

○ 2 classes
○ 3-4 classes
○ 5-6 classes
○ 7-8 classes
○ 9 or more classes

3. Classroom Equivalence

Classroom equivalence identifies the number of average size classes (20-30 students) that the space can accomodate comfortably, regardless of whether the space is being utilized for that many classes. If only one class can fit in the space, classroom equivalence is not coded.

B. Furniture/Furnishings

Code only one item each on #'s 1-4.

1. Desks or tables with seats attached
   Desks or tables with movable chairs
   Combination

2. Fixed desks/tables
   Movable desks/tables
   Combination

3. Desks/tables in rows
   Desks/tables in arrangement other than rows
   Combination

4. Three or more learning centers
   One or two learning centers
   No learning centers

A learning center is a physical area set off by the teacher where students can explore a particular medium independent of the teacher. The space is set up so that the students have clearly defined instructions and therefore can do their own work. The physical area may consist of only one table or be a more elaborate arrangement.
Do not code as learning centers an area that is essentially storage for books, craft materials, games or an area where students only pick up mimeographed assignments and work at their desk.

#'s 5 and 6 are optional. Code only if any of the items are present:

5. Stuffed furniture, sofa, chairs, pillows, etc.
The classroom that has any furniture that is soft and reminiscent of what would more typically be found in a home.

6. Rugs, carpet
A rug or carpet that is large enough to provide a comfortable place for students to work and/or play. A room with an area rug is coded as well as a room with a floor completely covered with carpet. A rug used at the entrance of a classroom for wiping feet is not coded.

---

Code only one item on #7:

7. Degree of alteration to physical environment
Alteration refers to the degree to which the environment has been changed or decorated.

-Little or no alteration
This environment has barely been altered from what was originally there. That is, the bulletin boards may have only one or two displays on them.

-Moderately altered
This environment may have bulletin board displays, a plant here and there, possibly an area rug, or one learning center.

-Highly altered by display of objects or materials
This environment is significantly altered by some or all of the following: Bulletin board displays, plants, rugs, curtains, more than one learning center, room dividers such as tie-dye hangings, and/or wall murals. This coding represents not only the number of plants or rugs, but also the uniqueness of the alteration.

---

#8 is optional. Code only one item, if art work is present:

8. Art work primarily commercially or teacher made
Art work such as magazine cutouts, posters, or reproductions of photographs or art work is coded

-Art work primarily student made
This coding refers to art work of students made either individually, as in drawings, or collectively, as in murals. If the art work is 50% student made and 50% commercially made, code student made.

---

#9 is optional. Code only if present:

9. One or more displays having to do with countries other than the United States
A display means more than just a flag of another country; a sense of the country should be provided by a display for this code.

## 4. Equipment and Materials

Code only items visible in the classroom:

○ Books, magazines
○ Games, puzzles
○ Maps, globes
○ Live animals
○ Live plants
○ Teaching aids
○ Tapes
○ AV equipment
○ Chalkboard
○ Art materials
○ Teaching machines
○ Overhead projectors

The list below refers to equipment and materials that are in the classroom and visible to the observer. This category does not refer to equipment that is in a central area for use by a number of classes, but rather it must be in the classroom being observed.

a. Books, magazines

b. Games, puzzles

c. Maps, globes

d. Live animals

e. Live plants

f. Teaching aids (catch-all)

g. Tapes, record players (not tied to teaching machines)

h. Audio-visual equipment (TV, projectors, slide projectors)

i. Chalkboard

j. Art materials

k. Teaching machines

l. Overhead projectors

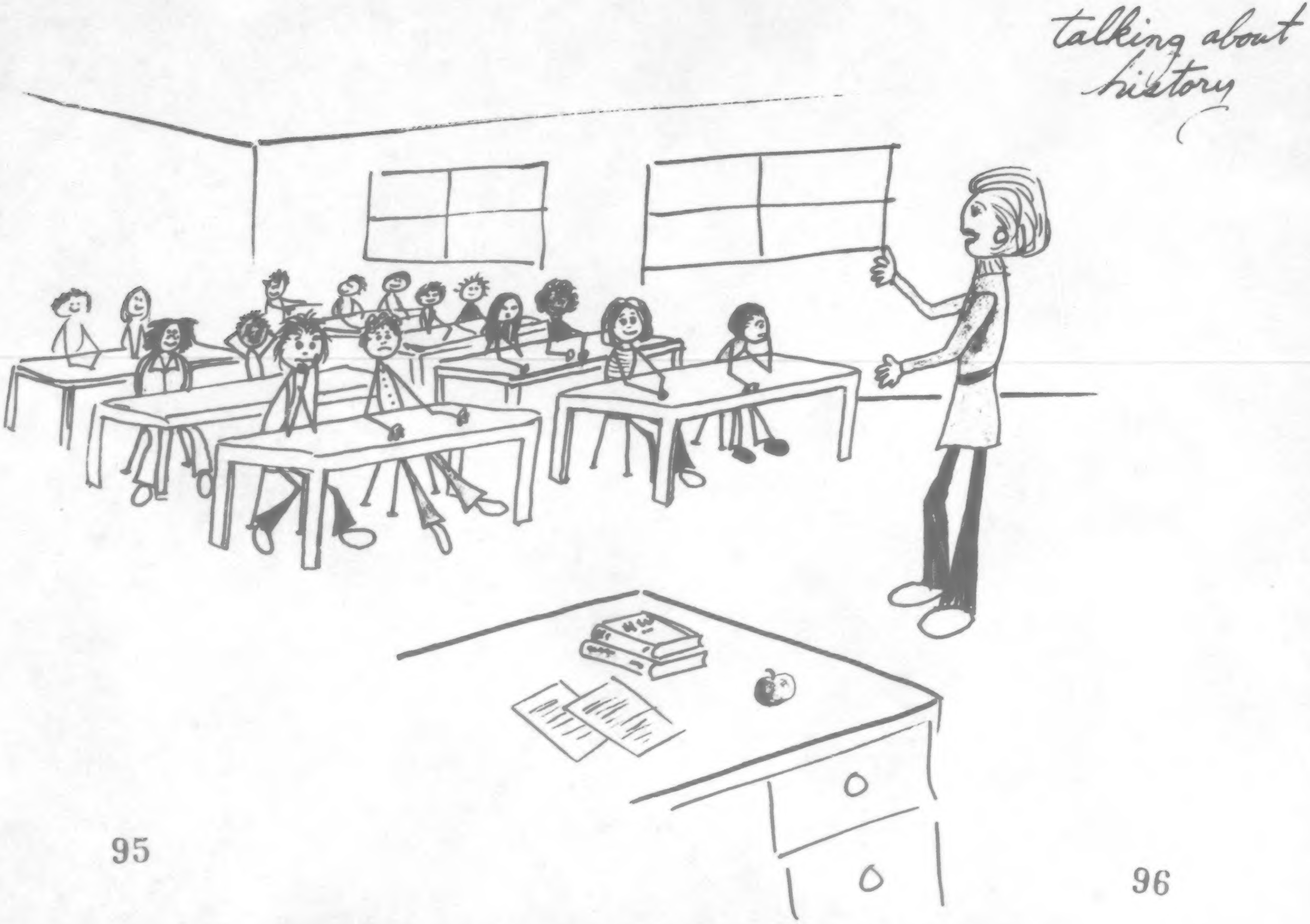
## C. CLASSROOM SNAPSHOT

The Classroom Snapshot is coded just before the coding of the Five-Minute Interaction (FMI). The Snapshot records the distribution of adults and students involved in activities which are occurring simultaneously. Essentially, the Snapshot identifies (1) the activities occurring, (2) the materials used in these activities, (3) the subject being taught, (4) grouping patterns, (5) teacher, aide, and student responsibilities, and (6) students involved in activities independent of adults.

### 1. Description of the Classroom Snapshot

In the Snapshot, the activities are listed on the left with groups of bubbles in five columns on the right. The numbers that appear in these bubbles refer to the number of persons or number of groups in the categories identified in the column headings. Within each activity there are as many as four rows of bubbles with one of the following letters identifying each: T (Teacher), A (Aide), S (Student), C (Cooperative), and I (Student Independent of Any Adults). In using the Snapshot, the observer scans the room in which the observation is taking place and marks the appropriate bubbles which describe how persons in the room are grouped within each activity. The bubbles are read in relationship to both the column and row in which they appear. For example, in Activity 2, if the "2" bubble in the "A" row under the "Small groups" column is coded, it is interpreted to mean that 2 aides are each instructing a small group of students in some kind of skill. This bubble, therefore, refers to 2 small groups of students, each with an aide. The coding is not read as one aide with 2 small groups of students. (In a "snapshot" the aide cannot be in two places at once).

A drawing and an example of how to code the situation depicted in the drawing are presented on the next three pages. An explanation of the coding follows.


talking about history

# CLASSROOM SNAPSHOT

| ACTIVITIES | | One Student | Small Groups | Medium Groups | Large Groups | Total Class |
|---|---|---|---|---|---|---|
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 1. Preparation for Assignments or Instructions/Cleanup | I | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ● S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ● |
| ○ Story Time ○ Materials and Equipment | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 2. Explain, Lecture, or Read Aloud | S | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 3. Demonstration | S | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 4. Discussion | C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 5. Simulation, Role Playing | C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 6. Reading | I | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 7. Work on Written Assignments | I | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 8. Practice or Perform (psycho-motor, physical) | I | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 9. Practice or Perform (verbal) | I | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| | C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 10. Taking Test or Quiz | I | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| ○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. | C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| 11. Audio Visual Equipment ○ Television, Radio ○ Tapes, Records ○ Tchg Machines ○ Films, Filmstrips | I | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |

12. Student Non-Task Behavior or Teacher Social Interaction with Student(s) – No Assignment

| | | | | | |
|---|---|---|---|---|---|
| T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| I | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |

○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. ○ No Subject

| | | | | | |
|---|---|---|---|---|---|
| T | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| A | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |

13. Adult Disciplining Students

○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E.

①②③④ Teacher ①②③④ Aides

14. Adult Monitoring and/or Observing Students

○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E. ○ No Subject

①②③④ Teacher ①②③④ Aides

15. Adult Custodial, Routines

○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E.

①②③④ Teacher ①②③④ Aides

16. Adult Not Involved or Out of Classroom

○ Eng ○ Math ○ Sci ○ S.S. ○ Arts ○ F.L. ○ P.E.

| | | | | | |
|---|---|---|---|---|---|
| C | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |
| I | ①②③④⑤ | ①②③④ | ①②③ | ①② | ① |

17. Student Non-Task Behavior During Subject

○ 0-24% ○ 25-49% ○ 50-74% ● 75-100%

18. Percentage of Class at High Interest Level

**For This Snapshot Only**

Number of Teachers in Classroom ⓪ ● ② ③ ④

Number of Aides in Classroom ● ① ② ③ ④

Number of Visitors in Classroom ● ① ② ③ ④

Number of Students

| | |
|---|---|
| ⓪ | ⓪ |
| ● | ① |
| ② | ② |
| ③ | ③ |
| ④ | ④ |
| ⑤ | ● |
| ⑥ | ⑥ |
| ⑦ | ⑦ |
| ⑧ | ⑧ |
| ⑨ | ⑨ |

Only one activity is going on in this classroom--Activity 2. The teacher is lecturing to the total class. Therefore, the circle that corresponds to both Activity 2 and total class is located. Specifically, the row in the Activity 2 section identified by the letter "T" is marked since the group is directed by the teacher. If the group were directed by an Aide, the row identified by the letter "A" would be marked instead. Above the activity, but within that section, the circle indicating Social Studies is also marked to indicate that the content or subject is history.

On the second page of the Snapshot, the last bubble in section 18 is marked, indicating a percentage of Class at High Interest Level of 75-100%, as most of the class seems to be very interested. At the bottom of the second page, the bubbles indicating one teacher, no aides, fifteen students, and no visitors are also marked.

### 2. Classroom Snapshot Definitions

a. Group size

| Descriptor | Range |
|---|---|
| one student | 1 student |
| small group | 2-6 students |
| medium group | 7-13 students |
| large group | More than 13 students |
| total class | total class (regardless of number of students) |

b. Director of the group

| Descriptor | |
|---|---|
| T | Teacher led |
| A | Aide led |
| S | Student led |
| C | Independent of adult--cooperative activity |
| I | Independent of adult--Independent activity |

### c. Subject area(s)

Specifically, the subject areas are English, Mathematics, Science, Social Studies, Arts, Foreign Language, and Physical Education.

A subject area is recorded for each of the activities going on. If different groupings are involved in the same activity but in different subjects, all of the subject bubbles that correspond are marked. If an activity is occuring that does not fall into any of the subject categories, such as home economics, carpentry, industrial arts, leave the subject bubble blank.

### d. Activities

Adults are recorded within an activity only when they are leading or directing the activity, or are actively involved as participants. If the adult is monitoring, she/he should be recorded in Activity 14.

#### (1) Preparation for Assignments or Instruction/Cleanup

Recorded when assignments are being made or adults and students are setting up before the actual instructional activities begin. Also recorded when adults and students are putting away materials or books, cleaning up, changing activities, or getting ready to leave.

#### (2) Explain, Lecture, or Read Aloud

Recorded when an adult or a student is speaking to or reading aloud to some grouping of students to inform them about a subject. "Story Time" is defined as reading a story, as opposed to reading aloud from a textbook; English is automatically coded as the subject. "Equipment and Materials" is recorded when the person who is explaining or lecturing is using any of the following as an adjunct to the lecture: illustrative materials from books or magazines; games and puzzles; maps and charts; globes, models, plants, and animals; audio-visual equipment; records and tapes; films, filmstrips, and slides.

(3) Demonstration

Recorded when an adult or student is showing how something works or is done.

(4) Discussion

Recorded when an adult and students or just students are involved in an extended verbal exchange that is a planned activity.

(5) Simulation, Role Playing

Recorded when two or more persons are acting out roles, for example, people, animals, emotions. It does not include practice or performance of a play, which would be coded under Activity 9.

(6) Reading

Recorded when students are reading silently to themselves, or when a student is reading aloud to improve reading skills.

(7) Work on Written Assignments

Recorded when students are writing papers, doing computation, or any other written work which is done non-verbally.

(8) Practice or Perform (psycho-motor, physical)

Recorded when students are involved in activities in physical education shops, arts, typing, home economics, and using manipulative materials or games in any subject area.

(9) Practice or Perform (verbal)

Recorded when students are involved in primarily verbal activities, such as repetitive or rote work, giving a speech for practice in speaking, debating, drama practice or performance, and singing.

(10) Taking Test or Quiz

Recorded when students are taking a verbal or written test or quiz about the subject matter, either as a group or as individuals.

(11) Audio-Visual Equipment

Recorded when students are using or watching: television, radio, teaching machines, tapes, records, films, or filmstrips without the assistance of an adult for instructional purposes. In effect, the equipment assumes the role of a teaching adult. (Only students are recorded in this Activity.) When equipment is used only for entertainment, it is coded under #12.

(12) Student Non-Task Behavior or Teacher Social Interaction With Students (no assignment)

Recorded when (1) students are either involved in conversation or physical activity that is unrelated to classroom concerns or are not involved in any activity, (2) students are waiting for assistance, directions, instruction, or access to materials and equipment, or (3) students are arriving and departing. The "C" row is marked when students are interacting, and the "I" row is marked when students are functioning as individuals. Essential to this Activity is that no apparent topic is assigned or can be started. It is essentially dead time vis-a-vis instruction.

(13) Adult Disciplining Students

Recorded when a teacher or aide is reprimanding student(s) for an extended period of time. "No Subject" is recorded when the adult is reprimanding a student's behavior; a subject area is coded if the adult is reprimanding the student in reference to a subject.

(14) Adult Monitoring and/or Observing Students

Recorded for those times when a teacher or an aide is observing students (adult may be standing still or walking around) while they are involved in any activity, including watching or listening to audio-visual equipment. (Only adults are recorded in this Activity.)

(15) Adult Custodial, Routines

Recorded when a teacher or an aide is involved in routine classroom activities or events such as preparing and/or distributing materials, setting up equipment and furniture, taking roll, checking materials, program planning, cleaning up, or consulting with another staff member. (Only adults are recorded in this Activity.)

(16) Adult Not Involved

Recorded when a teacher or an aide is not involved in classroom activities. (Only adults are recorded in this Activity.)

Activities 17 and 18 are both overviews of the classroom and are not part of the actual "Snapshot." More accurately, they describe, in summary form, how involved the students are in the activities the adults (or students themselves) have set up.

(17) Student Non-Task Behavior During Subject

Recorded to show the groupings of students or individual students that are assigned to a subject and are there physically, to some degree, but are not there mentally. They may be reading a comic book or teasing a neighbor while they are supposed to be involved in one of the activities and, in fact, have previously been recorded on the Snapshot as being part of another activity. If no task has been assigned or no task is obvious, then they should not be included in this section, but in Activity #12.

(18) Percentage of Class at High Interest Level

Used to summarize the percentage of students that are actively participating in the prescribed activity or subject matter. An evaluation of high interest is made by noting if the students appear "enthusiastic" about the task they are involved in.

e. Snapshot Summary

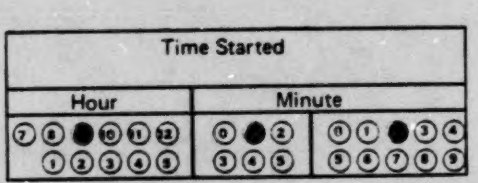
This records the total number of people in the classroom at the time the Snapshot was taken. Each adult, except for visitors and observer, should have been recorded in one activity or another. The total number of students present should be recorded here also.

## D. PREAMBLE

The Preamble is a brief introduction of the setting of the Five-Minute Interaction. The exact time coding began and the subject or content of the activity the teacher is involved in is recorded. At the end of the FMI, the exact time coding stopped is recorded and whether or not the subject content changed. This information is essential since it indexes the content of the five-minute period in addition to the exact duration of the interaction observation.

### 1. Time Started/Time Stopped

A clock or watch should be checked before "Time Started" is recorded and the FMI is begun; unless coder has access to a clock or watch with a second hand, coding should be started as a minute begins. In coding the time, the bubbles indicating the hour and minutes must be filled in accurately. The "Minute" section is divided and requires the coding of a bubble in each section. Below is an example of the correct way to code 9:12.



At the end of five minutes, coding is stopped and the time is recorded in the "Time Stopped" box at the end of the FMI. Although it is important that the observation be completed in five minutes, it is more important to show the actual times started and stopped.

2. Content Start/Content Change

The content of the subject in which the focus person is engaged at the start of the FMI is recorded in this section. The circle in front of the subject is marked to indicate in what subject area the content is considered to be. In the following example, the teacher was explaining algebra to the class.

| Content Start |
|---|
| ① Eng. |
| ● Math |
| ③ Sci |
| ④ S.S. |
| ⑤ Arts |
| ⑥ F.L |
| ⑦ P.E. |
| ⑧ Other |

At the end of the FMI, there is a similar box in which to record whether the content of the activity (subject) has changed. The box allows for recording "yes" if it has changed or "no" if it has not changed. Change means that the subject has at any time during the five minutes changed to another subject. Change would also be indicated if the subject had changed, and by the end of the five minutes, returned to the original subject - for example, if the Teacher started the five minutes talking about math, switched to english and then returned again to math. Change should not be recorded if the topic has simply drifted to social concerns or routine matters such as cleanup for the original content or subject area.

## E. FIVE-MINUTE INTERACTION

The FMI is explained in detail in Section I of the Observer's Manual.

## F. DAILY SUMMARY

The Daily Summary is an overview of the space and materials available and utilized by the students. It is also an attempt to ascertain the degree to which the teacher and/or students make decisions within the classroom.

Space is judged as crowded, adequate, or spacious. Materials are adequate or inadequate. Student use of materials and equipment is unrestricted, partially restricted, or restricted ("no opportunity to observe" is also an option). The Locus of Decision Making of a variety of aspects of the classroom is divided into predominantly teacher or predominantly student. The Locus of Decision Making can be viewed in the following way in order to determine the appropriate coding:

Seats - Who decides which seat the student sits in on a daily basis?
Group - Who decides how the students are grouped when they have groups?
Content - Who decides what skills will be mastered?
Materials - Who decides what materials can be used?
Space - Can the students choose their own space in which to work?
Time - Who determines (individuals and groups) how the time is spent in the classroom?
Learning Activities - Who decides what activities are used to master a particular skill?

The observer determines the coding of these issues by observation only. When it is not possible to observe a particular aspect of decision making, code Not Observed. Any evidence that the student has decision making power is recorded as predominantly students.

**Daily Summary**

**1. Space**

○ Crowded
○ Adequate
○ Spacious

**2. Adequacy of materials**

○ Adequate
○ Inadequate

**3. Student use of materials and equipment**

○ Unrestricted
○ Partially restricted
○ Restricted
○ No opportunity to observe

**4. Locus of Decision Making**

| | Predominantly Teacher | Predominantly Students | Not Obs. |
|---|---|---|---|
| Seats | ○ | ○ | ○ |
| Groups | ○ | ○ | ○ |
| Content | ○ | ○ | ○ |
| Materials | ○ | ○ | ○ |
| Space | ○ | ○ | ○ |
| Time | ○ | ○ | ○ |
| Learning Activities | ○ | ○ | ○ |

## G. SNAPSHOT AND FMI COMPARISON

The FMI and the Snapshot serve a different function for purposes of observation and therefore certain items may seem similar but are, in fact, coded differently. In contrast to the FMI the Snapshot DOES NOT record the fine details of the adult/student interaction, but rather furnishes an overview of the general events taking place. In addition the FMI and the Snapshot differ in the following ways:

(1) In the Snapshot all teachers are coded as teachers, whereas a Special Teacher in the FMI is coded as an Aide.

(2) In the Snapshot the Aide is anyone who has come into the classroom to assist the teacher and in the FMI the Aide is anyone regular in their attendance who is assigned a role by the teacher. (A parent who has come to lecture the class one time only would be coded as an Aide on the Snapshot, but as an Other on the FMI.) The Aide in the FMI is the focus person only when he/she is a special teacher (music, foreign language, etc.).

(3) In the Snapshot the observer is not coded while in the FMI the observer is coded as Other.

(4) Group size changes:

Small group (Snap) 2-6
Small group (FMI) 3-6

Medium group (Snap) 7-13
Medium group (FMI) 7-13

Large group (Snap) More than 13
Large group (FMI) More than 13

Total Class (Snap) Total class
Total Class (FMI) Actual number in group (S, M, or L)

# IV: WRITTEN EXCERCISES FOR SNAPSHOT

## HOME TRAINING SNAPSHOT #1

Place the following situations into the Classroom Snapshot:

1. One student is using a plant to show 2 other students the different parts.
2. Four students are working together on a large clay sculpture.
3. One student is explaining to another about how to use the F stop on the camera.
4. Three students are walking out the door with their cameras in hand discussing their photography assignment.
5. Ten students and one teacher are discussing the script for a play that they will perform.
6. One student is receiving instruction on how to use the microscope from a parent.
7. The principal is talking to the observer while observor is trying to code.
8. Eight students and a teacher from another class are listening to one student tell about her trip to Mexico.

# HOME TRAINING SNAPSHOT #1

| | Activities | Subject | Descriptor | Group Size |
|---|---|---|---|---|
| 1. | #3 | Science | S | ① sm. grp. |

The student is explaining the parts of a plant by using it to demonstrate to the other 2 students.

| | | | | |
|---|---|---|---|---|
| 2. | #8 | Arts | C | ① sm. grp. |

The students are manipulating clay, making this Psycho-motor-Physical.

| | | | | |
|---|---|---|---|---|
| 3. | #3 | Arts | S | ① one student |

Since one student is explaining to the other the use of equipment, this is coded under demonstration. One student is coded under S leaving one other student to be explained to.

| | | | | |
|---|---|---|---|---|
| 4. | #1 | Arts | C | ① sm. grp. |

The students are, in effect, preparing for their photography assignment by going out. Since they are discussing their assignment, the descriptor is C.

| | | | | |
|---|---|---|---|---|
| 5. | #4 | Arts | T | med. grp. |

A discussion is coded under--Discussion. Theatre Arts is coded as Arts.

| | | | | |
|---|---|---|---|---|
| 6. | #3 | Science | A | ① one student |

The parent has taken on the role of aide and is using equipment for purposes of demonstration.

7. NOT CODED (The Visitor, Principal, is accounted for at the end of the snapshot.)

| | | | | |
|---|---|---|---|---|
| 8. | #2 | S.S | S | ① med. grp. |

The student in show and tell, is coded under #2 Explaining.

| | | | | |
|---|---|---|---|---|
| | #14 | S.S | | ① teacher |

Since the teacher is part of the group, he can only be coded under #14. In the Snapshot a second teacher (not the focus teacher) is also coded T.

## HOME TRAINING SNAPSHOT #2

Place the following situations into the Classroom Snapshot:

1. Six students in reading group with teacher. The teacher and students are discussing Alice in Wonderland.

2. Seven students individually doing math follow-up activities in their workbook while seated at one table. The aide is checking another student's math work at the table.

3. Four students using phonograph and earphones. The lesson is on plot summary.

4. Two students at cooking center. One is making a peanut butter sandwich. The other is cleaning up after finishing his cooking project.

5. Three students working on constructing a table together. One is being disruptive and the others are ignoring him.

6. Aide is talking to the observer.

7. Seven separate pairs of students are drilling each other on multiplication tables.

8. One student is passing out reading homework assignment to the class (while the rest of class is involved in above activities).

## HOME TRAINING SNAPSHOT #2

| | Activities | Subject | Descriptor | Group Size |
|---|---|---|---|---|
| 1. | #4 | English | T | ① sm. grp. |

Since the students are involved in a discussion, this is coded under--DISCUSSION! Even though technically this is a reading group (to work on reading skills), the group at this moment is having a verbal exchange.

| | | | | |
|---|---|---|---|---|
| 2. | #7 | Math | I | ① med. grp. |

The students are working on written assignments individually, but are seated at one table; therefore making them a group.

| | | | | |
|---|---|---|---|---|
| | #7 | Math | A | ① one student |

When a teacher/aide is checking the written work of a student, this is coded under #7.

| | | | | |
|---|---|---|---|---|
| 3. | #11 | English (Tapes, Records) | I | ① sm. grp. |

Any use of A-V equipment by the student(s) are coded under #11. If the teacher/aide is involved in the activity she/he is coded under #14.

| | | | | |
|---|---|---|---|---|
| 4. | #8 | | I | ① one student |

This student is involved in a psycho-motor activity because he is manipulating materials.

| | | | | |
|---|---|---|---|---|
| | #1 | | I | ① one student |

The student is cleaning up after finishing his assignment.

| | | | | |
|---|---|---|---|---|
| 5. | #8 | | C | ① sm. grp. |

Because the students are working on a project together, they are coded C.

| | | | | |
|---|---|---|---|---|
| | #17 | | I | ① one student |

Since one student is not on task, he is also coded under #17. He is coded I with one student as the others are not involved.

| | | | | |
|---|---|---|---|---|
| 6. | #16 | | | ① one aide |

Remember: observer is never coded on the Snapshot, not even as a visitor at the end of the Snapshot. Aide is coded in #16 since she/he is not involved in any classroom activities.

| | Activities | Subject | Descriptor | Group Size |
|---|---|---|---|---|
| 7. | #9 | Math | C | ④ ③ Small Group |

When more than the total number of students or groups on the snapshot require coding, use the highest digits necessary to complete the total (e.g., six small groups = ④ ②, not ③ ② ① .

| | | | | |
|---|---|---|---|---|
| 8. | #1 | English | I | ① One student |

## HOME TRAINING SNAPSHOT #3

Place the following situations into the classroom snapshot:

1. Two students are working together at a learning center using water and sand to understand measurement.
2. Two students are also working at above learning center but are working alone.
3. Five students are working on a mural on the wall. They are each working on a section of the mural.
4. One student is sitting on a couch reading Alice in Wonderland.
5. Three students are teasing the pet hamster while they wait for directions from the teacher.
6. Two students are doing carpentry independently at one workbench.
7. Six students are sitting around a table working on math homework together.
8. Two students are working together on French flash cards. (One is holding them up while the other answers.)
9. The teacher is correcting the behavior of three students who had been fighting.
10. A high school student is correcting spelling papers at the teacher's desk.
11. An aide is listening to an alphabet record with three students.

# HOME TRAINING SNAPSHOT #3

| | Activities | Subject | Descriptor | Group Size |
|---|---|---|---|---|
| 1. | #8 | Math | C | ① sm. grp. |

The students are working together (C) to understand math. As they are manipulating objects, this is coded #8.

| | | | | |
|---|---|---|---|---|
| 2. | #8 | Math | I | ① sm. grp. |

Even though these students are also working at the same learning center as those students in the above example, the descriptor changes as they are working independently.

| | | | | |
|---|---|---|---|---|
| 3. | #8 | Arts | I | ② sm. grp. |

These students are working in a group independent of one another. This is coded #8 because again they are manipulating materials (psycho-motor). Because of example 2 there are now two small groups working independently under #8. Therefore, the 1 bubble is erased and 2 is coded.

| | | | | |
|---|---|---|---|---|
| 4. | #6 | English | I | ① one student |

A student reading is coded #6. If the student were reading a book for a science class, science would be bubbled in.

| | | | | |
|---|---|---|---|---|
| 5. | #12 | | C | ① sm. grp. |

The students have no assignment; therefore, they are coded #12. Since they are teasing the hamster as a group, they are coded C.

| | | | | |
|---|---|---|---|---|
| 6. | #8 | | I | ③ sm. grp. |

The students are again manipulating materials and therefore, coded #8. This is now the third small group working independently under #8 which means the 3 is bubbled in and the 2 erased.

| | | | | |
|---|---|---|---|---|
| 7. | #7 | Math | C | ① sm. grp. |

The students are working on written assignments together.

| | | | | |
|---|---|---|---|---|
| 8. | #9 | F. L. | C | ① sm. grp. |

The students are practicing language skills together which are considered verbal practice or performance.

|  | Activities | Subject | Descriptor | Group Size |
|---|---|---|---|---|
| 9. | #13 | No Subject | T | ① sm. grp. |

The teacher is disciplining the students about their social interaction without reference to any subject matter. If she had been disciplining students about the way they used science materials, for example, the science bubble would be marked.

|  |  |  |  |  |
|---|---|---|---|---|
| 10. | #15 | English |  | ① Aide |

The high school student is considered an aide for the Snapshot, even if she/he is not assigned regularly. When the teacher or aide is working independently she/he is coded under #15. If the person is not involved in any routine activities, but is clearly doing personal business, then the coding is under #16.

|  |  |  |  |  |
|---|---|---|---|---|
| 11. | #11 | English (Tapes, Records) | I | ① sm. grp. |
|  | #14 | English |  | ① Aide |

Since there is no T or A under #11, the students and the teacher have to be coded separately. When the teacher is part of the group involved with A-V equipment, she/he is coded under #14 as Monitoring/Observing. The students are seated in a group but the activity is an independent one. Performance pieces (as in tapes, records, films) are coded under English.

## HOME TRAINING SNAPSHOT #4

Place the following situations into the Classroom Snapshot:

1. Four students are sitting on an area rug and eating the products of their cooking class and talking together.
2. Seven students are learning from another student in their class how to tutor younger children in English.
3. Four students are practicing penmanship at a table.
4. One student and one aide are arguing over how much homework is to be assigned for the next day's science class.
5. Eight students are sitting in a circle listening to a parent read a story.
6. The teacher is at his desk reading Playboy.
7. One student is crying and another student is comforting him--they have no assignment.
8. Three students fighting over a tool they each feel they need to work on their carpentry project.

## HOME TRAINING SNAPSHOT #4

| | Activities | Subject | Descriptor | Group Size |
|---|---|---|---|---|
| 1. | #12 | | C | [✓ 1] sm. grp. |

The students eating is not part of the activity.

As there is no separate bubble for Home Economics, the subject is not coded. The students are interacting together (C) in one small group.

| | | | | |
|---|---|---|---|---|
| 2. | #2 | English | S | [✓ 1] med. grp. |

One student is explaining to the other students how to tutor.

| | | | | |
|---|---|---|---|---|
| 3. | #8 | English | I | [✓ 1] sm. grp. |

The students are engaged in a motor activity. They are working separately (independently); however, they are seated in a group. As there is no bubble for penmanship, we will code it under English.

| | | | | |
|---|---|---|---|---|
| 4. | #1 | Science | A | [✓ 1] one student |

Since this issue has arisen in the middle of giving an assignment, it is coded in #1.

| | | | | |
|---|---|---|---|---|
| 5. | #2 | English<br>(Story Time) | A | [✓ 1] med. grp. |

For purposes of the Snapshot only, an aide is any person taking on the role of teacher whose title is not teacher (parent, older student from another class). Reading a story is automatically coded English.

| | | | | |
|---|---|---|---|---|
| 6. | #16 | | | [✓ 1] teacher |

When an adult is not involved in instructionally related activities or routines, he/she is coded under #16.

| | Activities | Subject | Descriptor | Group Size |
|---|---|---|---|---|
| 7. | #12 | | C | ② sm. grp. |

When students are interacting on a social level (crying, fighting, laughing, playing) and there is no assignment, it is coded #12. Since one student is comforting the other, they are cooperating.

| | | | | |
|---|---|---|---|---|
| 8. | #8 | | C | ① sm. grp. |
| | #17 | | C | ① sm. grp. |

The students, if they were on task, would be coded #8. Since they are supposed to be working on their carpentry, and they are not, they are coded under #8 and #17. Under #17 they are coded C since in order to fight technically, they must cooperate.

## HOME TRAINING SNAPSHOT #5

Place the following situations into the Classroom Snapshot:

1. One student is giving another student a Spanish quiz.
2. Four students are sitting at a table quietly, waiting for the aide to administer an Italian test to them.
3. An aide is showing a student how to use A-V equipment.
4. The teacher is walking around the room looking at what the students are doing in their groups. (English)
5. Six students are at a table with their history books open in front of them and they are giggling and playing; one student at the same table is reading.
6. Four students are playing house in the living room area (assignment).
7. One student is aimlessly walking around the room.
8. One aide is talking about Picasso to 5 students and showing them reproductions of his work.

## HOME TRAINING SNAPSHOT #5

| | Activities | Subject | Descriptor | Group Size |
|---|---|---|---|---|
| 1. | #10 | F.L. | C | 1 sm. grp. |

Since there is no S code under this activity, C is used to reflect that the students are working together; even though one is in the teacher role.

| | | | | |
|---|---|---|---|---|
| 2. | #12 | | I | 1 sm. grp. |

At this moment there is no assignment; therefore, the coding is #12. Since the students are not interacting they are coded I rather than C.

| | | | | |
|---|---|---|---|---|
| 3. | #3 | | A | 1 one student |

Because the aide is explaining how to use the equipment, the coding is #3. If in a situation like this, the subject is unclear and there is no way to find out, leave it blank.

| | | | | |
|---|---|---|---|---|
| 4. | #14 | English | | 1 teacher |

At any one moment in time the teacher may be observing a particular student(s) involved in a particular task and the subject coding would reflect what is being observed. If the teacher is not really observing but is simply glancing around the room, the code would be #16.

| | | | | |
|---|---|---|---|---|
| 5. | #6 | S.S. | I | 1 med. grp. |

Even though six students are not on task they are coded along with the one student that is on task as if they were doing the work assigned, thus making them a medium group.

| | | | | |
|---|---|---|---|---|
| | #17 | S.S. | C | 1 sm. grp. |

Since they are not on task, they are also coded under #17.

| | | | | |
|---|---|---|---|---|
| 6. | #5 | S.S. | C | 1 sm. grp. |

The students are playing house and are coded under role playing. Broadly speaking this could be conceived as part of Social Studies.

|  | Activities | Subject | Descriptor | Group Size |
|---|---|---|---|---|
| 7. | #12 |  | I | ① one student |

It appears that this student has no assignment; therefore, he is coded under #12.

|  |  |  |  |  |
|---|---|---|---|---|
| 8. | #2 | Arts (materials & equipment) | A | ① Sm. Group |

When materials are used an an adjunct to the lecture, activity #2 is coded. Activity #3 would be coded when the focus is on explaining how to use materials or equipment.

## HOME TRAINING SNAPSHOT #6

Place the following situations into the Classroom Snapshot:

1. An aide is reading a story to seven students.
2. Six students are scattered on the floor mixing colors.
3. The teacher is cleaning the papers off her desk.
4. Three students are putting some drawings up on a bulletin board that they just finished.
5. One student is talking to observor and has no assignment.
6. Four students are sitting at a table making a color wheel together.

Please code the following example as a separate classroom:

7. Eight students are performing a play for the class.

## HOME TRAINING SNAPSHOT #6

| | Activities | Subject | Descriptor | Group Size |
|---|---|---|---|---|
| 1. | #2 | English (Story Time) | A | ① med. grp. |
| 2. | #8 | Arts | I | ① sm. grp. |

The students are manipulating materials independent of one another.

| | | | | |
|---|---|---|---|---|
| 3. | #15 | No Subject | | ① teacher |

Since the teacher does not seem to be involved with any instructionally related task, No Subject is coded. If she were preparing material or correcting assignments, for example, she would be coded under the appropriate subject bubble.

| | | | | |
|---|---|---|---|---|
| 4. | #1 | Arts | C | ① sm. grp. |

The students are involved in routine, custodial matters together.

| | | | | |
|---|---|---|---|---|
| 5. | #12 | | I | ① one student |

Since the observor is not included in any of the coding, the student is recorded as involved in his non-task behavior independently.

| | | | | |
|---|---|---|---|---|
| 6. | #8 | Arts | C | ① sm. grp. |
| 7. | #9 | Arts | C | ① med. grp. |
| | #2 | Arts | S | ① Total Class |

This example is UNIQUE in that it is double coded under two instructional activities. In this way both the actors and the audience are accounted for. When there is a group performing before an audience as in dramatic performance, panel discussion, debate, the audience and the performers are coded.

## Home Training Snapshot #7

Place the following into the classroom snapshot:

1. Class is taking a government exam.
2. Teacher is disciplining one student she caught cheating.

## Home Training Snapshot # 7

| | Activities | Subject | Descriptor | Group Size |
|---|---|---|---|---|
| 1. | #10 | S.S. | I | ① Lge Group |
| 2. | #13 | S.S. | T | ① One Student |

If one or more students are separated from the group (except in #17), total class can not be coded.

## Home Training Shapshot #8

Place the following into the Classroom Snapshot

1. Special art teacher is lecturing class on medieval painting.
2. Two students are passing notes.
3. Regular teacher is demonstrating to aide how to use the tape recorder.

## HOME TRAINING SNAPSHOT #8

| | Activities | Subject | Descriptor | Group Size |
|---|---|---|---|---|
| 1. | #2 | Arts | T | ① Total Class |

Anyone that is a teacher is coded a teacher in the snapshot. This differs from the F.M.I., where any teacher other than the focus teacher is coded an Aide.

| | | | | |
|---|---|---|---|---|
| 2. | #17 | Arts | C | ① Small Group |

Students recorded in #17 must be couble coded in #17 and in the assigned activity. Note that they do not affect the group size of the activity category. Passing notes is by nature a cooperative action.

| | | | | |
|---|---|---|---|---|
| 3. | #15 | | | ① Teacher |
| | #15 | | | ① Aide |

Since there is no provision for a teacher interacting with another teacher or aide, this event must be coded either under #15 or #16. When the interaction is tied to school-related activities, the coding is under #15. If the exchange is social, it is coded under #16. A teacher monitoring an aide is coded under #14. Both adults are coded under the same activity. That is, if there were two teachers discussing a movie, they would be coded under #16 ② Teachers. If, by some rare set of circumstances, you cannot hear what is being discussed, leave both the subject bubble and the No Subject bubble blank.

# APPENDIX D

## Variable Specifications

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## I. GENERAL ID & "ACCOUNTING" VARIABLES

At the elementary level, up to 3 observations (days) x 4 books/obs. = 12 books may be present, for any given class.

At the secondary level, up to 3 observations (periods) x 1 book/obs. = 3 books may be present, for any given class.

All books (records) should be sorted by:

School No., & within school by
    Classroom No., & within classroom no. by
        Obs. No., & within obs. no. by
            Book No.

All books with the "reliability" bubble checked should be deleted from this file, and saved in a second file. A "reliability" book for any given class should have a matching "non-reliability" book* (Date, Obs. No., & Book No. should match). A third file, i.e., the "non-reliability" matching file should also be compiled and saved, but not dropped from the 1st file.

### A. ID Variables

School No.
Class No.
Grade Level: Min.
Grade Level: Max.
No. Students Enrolled
Period No. (Secondary Only; Blank for Elem.)
Subject Area (Secondary Only; Blank for Elem.)
Elapsed Time (End Time-Beg. Time)
# Teachers reg. working
# Aides reg. working

From front cover of Obs. No. 1, Book No. 1

---

*The reliability bubble will not be checked.

## B. "Accounting" Variables

Number of times teacher/class observed (2 or 3); If only 1, junk it

Number of books (6-12 for elem.; 2-3 for secon.)

| | |
|---|---|
| Date<br>Number of books | obs. #1 |
| Ditto | obs. #2 |
| Ditto | obs. #3 |

Reliability check done (1 or more times) for teacher/class (1 = Yes; 2 = No)

## II. PHYSICAL ENVIRONMENT INVENTORY VARIABLES

27 variables as defined on INTRAN codebook.

Take first 15 from 1st obs, 1st book (sections A & B)

Last 12: = 1 if checked in 1st book of any obs (section C)

## III. DAILY SUMMARY VARIABLES

Check last page of 1st book for each observation.

Compute 10 sums, excluding the non-scalable response codes ("no opportunity to observe") for items 3-4.

Tally the number of missing values (62s/63s) for the 10 sums.

Tally the number of non-scalable codes for items 3-4 (8 tallies).

# Symbolic Layout of Item-Equivalent Scores for First 13 Activities of the k th SNAPSHOT (of K snapshots)

j

i

Activities 1-13

|  |  |  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|---|---|
|  |  |  | Group Types |  |  |  |  |  |
|  |  |  | I | Sm | Med | Lg | Tot |  |
| 1 |  | T | $X_{k11}$ | $X_{k12}$ | $X_{k13}$ | $X_{k14}$ | $X_{k15}$ | $X_{k1\cdot}$ |
| 2 | 1 | A | $X_{k21}$ | $X_{k22}$ | $X_{k23}$ | $X_{k24}$ | $X_{k25}$ | $X_{k2\cdot}$ |
| 3 |  | C |  |  |  |  |  |  |
| 4 |  | I |  |  |  |  |  |  |
| 5 |  | T |  |  |  |  |  |  |
| 6 | 2 | A |  |  |  |  |  |  |
| 7 |  | S |  |  |  |  |  |  |
| 8 |  | T |  |  |  |  |  |  |
| 9 | 3 | A |  |  |  |  |  |  |
| 10 |  | S |  |  |  |  |  |  |
| 11 |  | T |  |  |  |  |  |  |
| 12 | 4 | A |  |  |  |  |  |  |
| 13 |  | C |  |  |  |  |  |  |
| 14 |  | T |  |  |  |  |  |  |
| 15 | 5 | A |  |  |  |  |  |  |
| 16 |  | C |  |  |  |  |  |  |
| 17 |  | T |  |  |  |  |  |  |
| 18 | 6 | A |  |  |  |  |  |  |
| 19 |  | C |  |  |  |  |  |  |
| 20 |  | I |  |  |  |  |  |  |
| 21 |  | T |  |  |  |  |  |  |
| 22 | 7 | A |  |  |  |  |  |  |
| 23 |  | C |  |  |  |  |  |  |
| 24 |  | I |  |  |  |  |  |  |
| 25 |  | T |  |  |  |  |  |  |
| 26 | 8 | A |  |  |  |  |  |  |
| 27 |  | C |  |  |  |  |  |  |
| 28 |  | I |  |  |  |  |  |  |
| 29 |  | T |  |  |  |  |  |  |
| 30 | 9 | A |  |  |  |  |  |  |
| 31 |  | C |  |  |  |  |  |  |
| 32 |  | I |  |  |  |  |  |  |
| 33 |  | T |  |  |  |  |  |  |
| 34 | 10 | A |  |  |  |  |  |  |
| 35 |  | C |  |  |  |  |  |  |
| 36 |  | I |  |  |  |  |  |  |
| 37 | 11 | C |  |  |  |  |  |  |
| 38 |  | I |  |  |  |  |  |  |
| 39 |  | T |  |  |  |  |  |  |
| 40 | 12 | A |  |  |  |  |  |  |
| 41 |  | C |  |  |  |  |  |  |
| 42 |  | I |  |  |  |  |  |  |
| 43 | 13 | T |  |  |  |  |  |  |
| 44 |  | A | $X_{k,44,1}$ | $X_{k,44,2}$ | $X_{k,44,3}$ | $X_{k,44,4}$ | $X_{k,44,5}$ | $X_{k,44,\cdot}$ |
|  |  |  | $X_{k\cdot 1}$ | $X_{k\cdot 2}$ | $X_{k\cdot 3}$ | $X_{k\cdot 4}$ | $X_{k\cdot 5}$ | $X_{k\cdot\cdot}$ |

Each activity a is defined by $r_a$ rows ($2 \le r_a \le 4$), corresponding to "director" of the various grouping patterns; director can be either T (teacher), A (other adult), C (co-operative), I (individual), or S (student).

Since different directors & number of directors are possible for each activity, the data are best regarded as a 44 × 5 matrix for $k^{th}$ snapshot with

$X_{kij}$ = item-equivalent score ($\ge 0$) for the $i^{th}$ row & $j^{th}$ column (group pattern type).

e.g. $X_{k,26,3}$ = score for activity 8, other adult directing medium-sized group

$X_{k,10,5}$ = score for activity 3, student directing total class.

Standard "dot" summation notation will be used to denote marginals,

$$X_{k\cdot 2} = \sum_{i=1}^{44} X_{ki2}$$

$$X_{\cdot ij} = \sum_{k=1}^{K} X_{kij}$$

$$X_{\cdot\cdot j} = \sum_{k=1}^{K} \sum_{i=1}^{44} X_{kij}$$

## IV. SNAPSHOT SPECIFICATIONS

### A. Weighting System for kth Snapshot

Following notation layout for first (mutually exclusive) 13 activities*

$x_{.1}$ = number of 1-student "groups"

$x_{.2}$ = number of small groups

$x_{.3}$ = number of medium groups

$x_{.4}$ = number of large groups

$x_{.5}$ = number of total groups

Let n = number students present for this particular snapshot (n is coded at end of each snapshot--IF n is missing, use "front page" value).

$w_j$ = weight (number of students) per grouping type ($j = 1, \ldots, 5$)

By definition:

$w_1 = 1$ & $0 \leq x_{.1} \leq n$

$2 \leq w_2 \leq 6$

$7 \leq w_3 \leq 13$

$14 \leq w_4 \leq n-1$

$w_5 = n$ & $0 \leq x_{.5} \leq 1$

NO GROUP CONFIGURATIONS EXIST:

IF: $x_{.j} = 0$ ($j = 1, \ldots, 5$), then snapshot "missing" & therefore invalid.

TOTAL GROUP EXISTS:

IF: $x_{.5} = 1$ & $x_{.j} = 0$ ($j = 1, \ldots, 4$), then coding is consistent & $w_5 = n$

$x_{.5} = 1$ & $x_{.j} \neq 0$ ($j = 1, \ldots, 4$), then coding is not consistent & snapshot invalid.

$x_{.5} > 1$ & $x_{.j} = 0$ ($j = 1, \ldots, 4$), then coding is not consistent & snapshot invalid.

$x_{.5} > 1$ & $x_{.j} \neq 0$ ($j = 1, \ldots, 4$), then coding is not consistent & snapshot invalid.

---

*k subscript is ignored herein since all that follows is always in reference to the kth snapshot. For example, $x_{.j}$ really means $x_{k.j}$; n really means $n_k$; $w_j$ really means $w_{kj}$

NO TOTAL GROUP EXISTS:

IF: $x_{.5} = 0$, then $n - x_{.1}$ = number of students remaining in small, medium & large groups

Small Groups Only:

If: $x_{.2} > 0$ & $x_{.3} = 0$ & $x_{.4} = 0$, then $w_2 = (n-x_{.1})/x_{.2}$

Medium Groups Only:

If: $x_{.2} = 0$ & $x_{.3} > 0$ & $x_{.4} = 0$, then $w_3 = (n-x_{.1})/x_{.3}$

Large Groups Only:

If: $x_{.2} = 0$ & $x_{.3} = 0$ & $x_{.4} > 0$, then $w_4 = (n-x_{.1})/x_{.4}$

Both Small & Medium Groups; no Large Groups:

If: $x_{.2} > 0$ & $x_{.3} > 0$ & $x_{.4} = 0$, then find that weight $w_2$ such that

$$w_3 = (n-x_{.1} - w_2 x_{.2})/x_{.3} \geq 7$$

beginning trial solutions with $w_2 = 5$, reducing $w_2$ by 1 until either $w_3 \geq 7$ or $w_2 = 2$. If $w_2 = 2$ and $w_3 < 7$, then for all $x_{i3} \neq 0$, reset $x_{i2} = x_{i2} + x_{i3}$ & recompute according to "small only" algorithm.

Both Small & Large Groups; no Medium Groups:

If: $x_{.2} > 0$ & $x_{.3} = 0$ & $x_{.4} > 0$, then find that weight $w_2$ such that

$$w_4 = (n-x_{.1}-w_2 x_{.2})/x_{.4} \geq 14$$

beginning trial solutions with $w_2 = 5$, reducing $w_2$ by 1 until either $w_4 \geq 14$ or $w_2 = 2$. If $w_2 = 2$ & $w_4 < 14$, then for all $x_{i4} = 0$, reset $x_{i3} = x_{i3} + x_{i4}$ & recompute according to "small/medium; no large" algorithm.

Both Medium & Large Groups; no Small Groups:

If: $x_{.2} = 0$ & $x_{.3} > 0$ & $x_{.4} > 0$, then find that weight $w_3$ such that

$$w_4 = (n-x_{.1}-w_3 x_{.3})/x_{.4} \geq 14$$

beginning trial solutions with $w_3 = 11$, reducing by 1 until either $w_4 \geq 14$ or $w_3 = 7$. If $w_3 = 7$ & $w_4 < 14$, then for all $x_{i4} \neq 0$, reset $x_{i3} = x_{i3} + x_{i4}$ & recompute according to "medium only" algorithm.

Small, Medium & Large Groups:

If: $x_{.2} > 0$ & $x_{.3} > 0$ & $x_{.4} > 0$, then find those weights $w_2$ & $w_3$ such that

$$w_4 = (n - x_{.1} - w_2 x_{.2} - w_3 x_{.3})/x_{.4} \geq 14$$

beginning trial solutions with $w_2 = 5$ & $w_3 = 11$, & thereafter using the following pairs for successive trials:

| $w_2$ | $w_3$ |
|---|---|
| 4 | 11 |
| 4 | 10 |
| 4 | 9 |
| 3 | 8 |
| 2 | 7 |

until either $w_4 \geq 14$ or both $w_2$ & $w_3$ equal 2 & 7 respectively. If $w_2 = 2$ & $w_3 = 7$ & $w_4 < 14$, then for all $x_{i4} \neq 0$, reset $x_{i3} = x_{i3} + x_{i4}$ & recompute according to "small/medium; no large" algorithm.

Following these weighting algorithms, when the weights are determined for any given snapshot, the following identity should prevail:

$$n \equiv x_{.1} + w_2 x_{.2} + w_3 x_{.3} + w_4 x_{.4} + n x_{.5}$$

(since $0 \leq x_{.5} \leq 1$, if $x_{.5} = 1$, then $x_{.1} = x_{.2} = x_{.3} = x_{.4} = 0$)

## B. Definition of Variables

The symbolic layout & weighting system above was for any particular snapshot, i.e., the kth one, out of K snapshots taken for any given class.

At the elementary level, $K \leq 48$ = 3 observations (days) x 4 books/observation x 4 snapshots/book.

At the secondary level, $K \leq 12$ = 3 observations (periods) x 1 book/observation x 4 snapshots/book.

Variables will be defined across the K snapshots for each class. For example,

$\sum_{k=1}^{K} n_k = n_. = N$ = Sum over all snapshots of the number of students present.

$\sum_{k=1}^{K} x_{k13,2} = x_{.13,2}$ = Sum over all snapshots of the number of small groups in cooperative discussion.

$\sum_{k=1}^{K} w_{k2}\, x_{k13,2}$ = Sum over all snapshots of the approximate number of students in cooperative discussions in small groups.

## 1. "Accounting" Variables

Number of valid* snapshots: K

Total number of students across snapshots: $n_{.} = N$

> Note: $n_k$ is coded at end of kth snapshot; it is this value that is used in determining the $w_{kj}$, i.e., by definition, $n_k = \sum_j w_{kj}\, x_{k.j}$.
>
> Thus, $N = \sum_k \sum_j w_{kj}\, x_{k.j}$.

| | |
|---|---|
| Total number of teachers across snapshots<br>Total number of aids across snapshots<br>Total number of visitors across snapshots | Coded at end of each snapshot |

Mean small, medium, large group size weights:

$$\bar{w}_{.j}\ (j = 2, 3, 4)$$

→ (Note: If data missing for these 3 variables on kth snapshot, replace with "front page" values.)

## 2. Unweighted Sums across Snapshots

Frequency of activity-by-director-by-group type combinations:

> Note: These are the 220 $x_{.ij}$'s ($i = 1, \ldots, 44$; $j = 1, \ldots, 5$), ordered with j the fastest moving subscript.

| | |
|---|---|
| Number of teachers monitoring/obs. students<br>Number of aides monitoring/obs. students | Activity #14 on each snapshot |
| Number of teachers in custodial/routines<br>Number of aides in custodial/routines | Activity #15 on each snapshot |
| Number of teachers not involved/out of room<br>Number of aides not involved/out of room | Activity #16 on each snapshot |
| Total "interest" rating | Activity #18 (sum of valid ratings) |
| Total missing "interest" ratings | Activity #18 (number of invalid ratings) |

Frequency of director (C or I) -by-group type combinations for activity #17; these are computed analogously to those $x_{.ij}$ above, but are separated due to their overlap with those $x_{.ij}$ above.

*See p. 3.

| | |
|---|---|
| Total "story time"<br>Total "materials & equip." | Activity #2 |
| Total "TV, radio"<br>Tchg machines<br>tapes, records<br>films, filmstrips | Activity #11 |

3. Weighted Sums across Snapshots

Approximate number of students per activity-by-director-by-group type combination.

Note: These are the 220 $\sum_k w_{ki} x_{kij}$'s (i = 1, . . . , 44; j = 1, . . . , 5), ordered with j fastest moving subscript. (If the variables $\frac{100}{N} \sum_k w_{ki} x_{kij}$ were computed, they could be interpreted as inferences about the percentage of "time spent" by students in the ith activity-director & jth group configuration.)

Approximate number of students per director-by-group combination for activity #17. (Again, these 10 vars. are computed as above, using same $w_{kj}$.)

4. Other Vars.

Variety of instructional activities: Concurrent (1 variable)

Let $A_{ka}$ = sum of the $x_{ki.}$ for activity a for the kth snapshot (i.e., the sum of the $r_a$ row totals corresponding to activity a)

For each snapshot, for a = 2, . . . , 11:

If $A_{ka} > 0$, reset $A_{ka} = 1$

Compute $\sum_{a=2}^{11} A_{ka} \leftarrow 10$

Finally, compute the total $\sum_{k=1}^{K} \sum_{a=2}^{11} A_{ka}$

Variety of instructional activities: By Observation (1 variable)

Let $m_t$ = number of snapshots for any given teacher/class on the tth

observation (day/period), i.e., $\sum_{t=1}^{T} m_t = K$ (Elem: $m_t \leq 16$) (Sec: $m_t \leq 4$)

$A_{ta}$ = sum of the $x_{ki.}$ for activity a over the $m_t$ snapshots defining the tth observation

For each observation, for a = 2, . . . ., 11:

If $A_{ta} > 0$, reset $A_{ta} = 1$

Compute $\sum_{a=2}^{11} A_{ta} = 10$

Finally, compute the total $\sum_{t=1}^{T} \sum_{a=2}^{11} A_{ta}$

where T = number of observations (days/periods) done for the class ($T \leq 3$)

Variety of grouping: Concurrent (1 variable)

If $x_{k.j} > 0$, reset $x_{k.j} = 1$

Compute $\sum_{k=1}^{K} \sum_{j=1}^{5} x_{k.j}$

Variety of grouping: By Observation (1 variable)

Let $x'_{tj}$ = sum of the $x_{k.j}$ over the $m_t$ snapshots defining the tth observation.

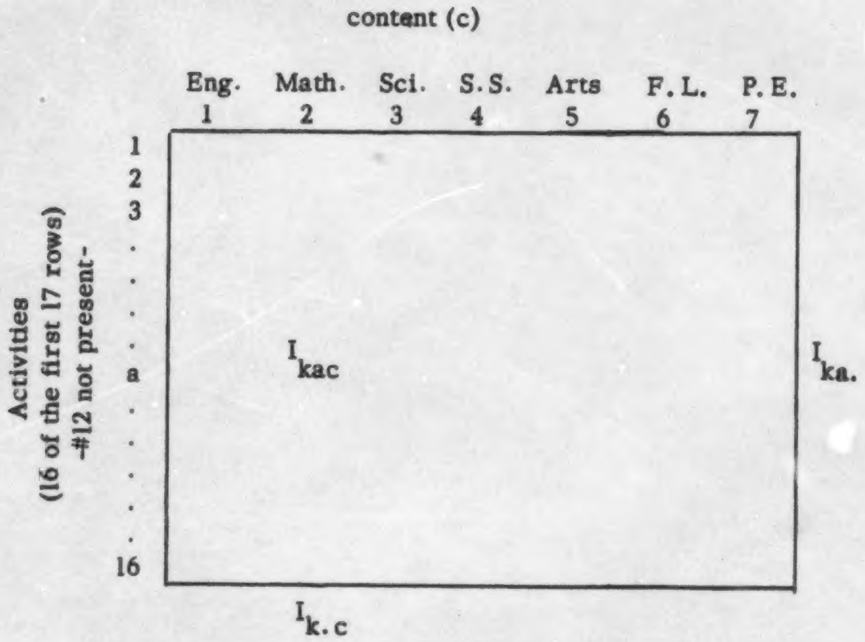
If $x'_{tj} > 0$, reset $x'_{tj} = 1$

Compute $\sum_{t=1}^{T} \sum_{j=1}^{5} x'_{tj}$

**For Elementary Only**

A complication arises for elementary school observation due to the 7 content bubbles present for most activities. Each content bubble is an item-equivalent, i.e., one or more contents may be indicated for each activity.

In effect, the following matrix of activity-by-content "indicators" can be formed for the kth snapshot:



$I_{kac}$ = 1 if cth content bubble marked for activity a
= 0 is not marked

$(c = 1, \ldots, 7)$

**All variables to follow should be "tacked" on to the entire elementary observation record (snapshot + FMI) after the variables, ignoring content considerations, have been computed.**

**Variety of content: Concurrent** (1 variable)

For each snapshot,

If $I_{k.c} > 0$, reset $I_{k.c} = 1$

Compute $\sum_{c=1}^{7} I_{k.c} \leq 7$

Then, compute $\sum_{k}^{K} \sum_{c=1}^{7} I_{k.c}$

## Variety of content: By Observation (1 variable)

Let $I_{t.c}$ = sum of the $I_{k.c}$ over the $m_t$ snapshots defining the tth observation.

For each observation,

If $I_{t.c} > 0$, reset $I_{t.c} = 1$

compute $\sum_{c=1}^{7} I_{t.c} \leq 7$

then, compute $\sum_{t=1}^{T} \sum_{c} I_{t.c}$

## Activity-by-content Indicator matrix over snapshots

16 x 7 matrix of $I_{.ac}$'s $(\sum_{k=1}^{K} I_{kac})$

## Unweighted sums--BY CONTENT

See section B. 2.

Recompute them separately by content, i.e., as the variables are being tallied, check their corresponding activities-by-content indicator matrix:

Eng = $I_{ka1} = 1$ ; $I_{kac}$ $(c = 2, 3, 4, 5) = 0$

Math = $I_{ka2} = 1$ ; $I_{kac}$ $(c = 1, 3, 4, 5) = 0$

Sci = $I_{ka3} = 1$ ; $I_{kac}$ $(c = 1, 2, 4, 5) = 0$

Soc St= $I_{ka4} = 1$ ; $I_{kac}$ $(c = 1, 2, 3, 5) = 0$

Arts = $I_{ka5} = 1$ ; $I_{kac}$ $(c = 1, 2, 3, 4) = 0$

& partition the sums accordingly.

(Note: All other content "configurations," e.g., a math-eng combination, a P.E., an error (i.e., all blank content bubbles) etc., will be left out of these tallies. This remaining "amount" of the snapshot will be retrievable as a remainder, if the separate content areas defined above are subtracted from the totals computed previously in B. 2.)

## Weighted Sums--BY CONTENT

Same content sorting procedure, except as applied to variables defined in B. 3.

## V. FMI SPECIFICATIONS

### A. "Accounting" Variables

L = number of valid FMI's* completed for any given teacher/ class across all observations (≤ 48 for elem; ≤ 12 for sec.).

F = number of valid frames* across all FMI's & observations (≤ 3360 for elem; ≤ 840 for sec.).

Mean time elapsed per FMI: (1 variable)

$$\sum_{\text{over L FMI's}} (\text{time stopped--time started}) / L$$

Cell frequencies of "Content Start"-by-"Content Change" cross tabulation table: (16 vars.)

Content Change?

Elementary Only

| | Yes | No |
|---|---|---|
| Eng. | | |
| Math | | |
| Sci | | |
| S.S. | | |
| Arts | | |
| F.L. | | |
| P.E. | | |
| Other | | |

Total ≡ L

*An FMI is valid if there are 40 or more valid frames. A frame is valid if there are no item equivalent scores (except #12 & #13 as indicated on INTRAN code book) equal to 62 or 63 or if it is not cancelled.

See note RE: REPEATS on p. 13.

## B. Interaction Variables defined across all observations & FMI's

These vars are defined line-by-line on attached coding forms. In essence there are:

### 4 "Forced-Response" Item-Equivalents

1) Who (T,A,O,S,D,2,Sm,M,L--mutually exclusive)
2) To Whom ( -ditto- )
3) What (1-12--mutually exclusive)
4) Context (Cx) (I,R,B,S--mutually exclusive)

and

### 8 "Optional-Response" or How Item-Equivalents

1) Nv
2) T
3) X
4) M
5) H
6) Z
7) (G,D,Pu--mutually exclusive)
8) (+, - --mutually exclusive)

Programming Logic--for any given variable, an FMI frame is "acceptable" and contributes a count of 1 if it is not cancelled and it meets the specifications on attached forms. (If the R/S/C is blank, it means "not C".)

"Acceptability" for any frame is defined such that for any . . .

Forced-Response Item-Equivalent: one or more codes indicated implies the presence of one of the codes is necessary and they should be read using an exclusive OR; codes not indicated implies their absence is necessary.

e.g., T, A, O indicated for To Whom means: "the presence of either T or A or O is necessary and the absence of S, D, 2, Sm, M, & L is necessary."

If CX is blank, four (4) variables are implied: one for each of I, R, B, S in combination with the other specifications.

Optional-Response Item-Equivalent: codes indicated (in either affirmed or negated form) are necessary; codes not indicated are not necessary.

e.g. G, not NV indicated for How means: "the presence of G & the absence of NV is necessary; neither the presence nor absence of the remaining How item-equivalents is necessary.

Variable names with asterisk require additional OR-logic (inclusive or exclusive as indicated) and require more than one line to define.

Parentheses are used with the 7th & 8th "How" item-equivalents, e.g., not (G, D) means "not G and not D is necessary;" (+, -) means" + or - is necessary."

FMI vars are defined as the relative number of frames conforming to their variable specifications.

Let $P_v$ = score for variable v

$F_v$ = number of frames conforming to var v's specifications

then $P_v = \frac{Fv}{F} \times 100$

Note: If the mean frequency ($M_v$) across FMI's for the defined variable is desired, it can be obtained as follows:

$$M_v = \frac{F}{L} \; P_v$$

$$= (\#\ \text{frames/FMI})\ P_v$$

**REPEATS:** If R-bubble is checked, use first previous non-cancelled frame as data.

## Elementary Only

Repeat all FMI interaction variables 5 times, once for each content (Eng/Math/Sci/S.S./Arts)--a content FMI is valid only if "content change" code is NO. These additional variables will be "tacked" on to the entire elementary observation record (snapshot + FMI) after the variables, ignoring content, have been generated.

SEE FOLLOWING PAGES FOR SPECIFIC FMI VARIABLE DEFINITIONS

## Variable Definitions: FMI

The following is an index of the specifications for the observation variables from the FMI section of the observation instrument. The variables are named and numbered exactly as they are listed on the data print out sheets. However, this list, rather than presenting a display of the percent of occurance, displays the specific code combinations that are minimumly necessary and possible within the variable definitions or parameters.

The variables vary according to complexity. Some are very specific and include only one kind of frame such as: adult to one child, corporal punishment. Other variables are more general and allow a variety of frame combinations such as: adult to students (all interactions). These variables are the basic units with which we will be working. They can be combined further but they cannot be subdivided. Keep in mind, however, that some of the variables are actually subdivisions of other more general variables (corporal punishment is a possible subdivision of the variable, adult to one student - verbal interaction). Therefore, any combination of these first run "microvariables" into larger, combined "macrovariables" must be done very carefully in order to avoid redundencies in the frequency counts.

The format for this "index" consists of listing the variable number and name and then listing the parameters of the allowable codes under each section heading: Who, to Whom, What and How. During the actual coding procedures, only one marking (encoding) was allowed (and necessary) in each section of the frame (except for the "How" section). However, since these variables usually include more than one type of frame, the parameters reflect this range and indicate more than one code which is acceptable. An example follows:

| # | Name | "Who" | "to Whom" | "What" | "How" |
|---|---|---|---|---|---|
| 4 | Adult Verbal Interact on<br>Adult to 1 Student | T,A,O | S,D | 1-9,11 | Not NV |

The frame fits this definition and is counted if: the "Who" section includes a T, an A or an O; and if the "to Whom" section includes an S or D and if the "What" section includes one of the codes 1-9 or 11 but not 10 or 12. In addition, the last section, the "How" section, may or may not have any or all of the codes except for the "NV" code. Acceptable frames, frames that would be counted in this variable, would include the following: TD4M, AD6Z, OS2, TS 9 and etc.

The index does not include information about the context section since all of the variables are listed according to their occurance within each context on the data print out. In other words, almost all of the variables will have five "scores" printed out, one each for the four contexts (I,R,B & S) and one "total" that records the total "score" across all contexts.*

---

*The only exceptions to this five score listing are found in variables 60-66. Variables 60-63 are defined such that they only occur in a given context and are therefore only listed in that context and in the total columns. On the data print-out, stars or asterisks are printed in the other columns to remind the reader that scores, by definition, can not occur there. The other type of exception occurs in variables 64-66. In these variables the R,B & S contexts were combined for the sake of simplicity and only one score is shown to indicate that combination. The procedure used is to print 1-----(result)-----1 across the three columns. In addition, for variables 65 and 66, the I column is again asterisked out, since again by definition this occurance is also impossible.

## OBSERVATION: FMI Variable Definitions

Page 1 ____

| Variable Description | | Variable Specification | | | |
|---|---|---|---|---|---|
| # | NAME | WHO | To WHOM | WHAT | HOW |
| 1 | ANYBODY to ANYBODY: "CONTEXTS" | T,A,O,S,D,2,Sm,M,L | T,A,O,S,D,2,Sm,M,L | 1-12 | |
| 2 | ADULT to STUDENT: "CONTEXTS" | T,A,O | S,D | 1-12 | |
| 3 | ADULT to STUDENTS: "CONTEXTS" | T,A,O | 2,Sm,M,L | 1-12 | |
| | TOTAL ADULT VERBAL INTERACTION | | | | |
| 4 | Adult to Student | T,A,O | S,D | 1-9,11 | not NV |
| 5 | Adult to 2 Students | T,A,O | 2 | 1-9,11 | not NV |
| 6 | Adult to 3-13 Students | T,A,O | Sm,M | 1-9,11 | not NV |
| 7 | Adult to Large/Total Class | T,A,O | L | 1-9,11 | not NV |
| | ADULT TO STUDENT(S): "WHATS" | | | | |
| | Direct Questions: | | | | |
| 8 | to 1 student | T,A,O | S,D | 1 | |
| 9 | to 2 or more | T,A,O | 2,Sm,M,L | 1 | |
| | Open Questions: | | | | |
| 10 | to 1 student | T,A,O | S,D | 2 | |
| 11 | to 2 or more | T,A,O | 2,Sm,M,L | 2 | |
| 12 | Response | T,A,O | S,D,2,Sm,M,L | 3 | |

OBSERVATION: FMI Variable Definitions

Page 2 ____

| Variable Description | | Variable Specification | | | |
|---|---|---|---|---|---|
| # | NAME | WHO | To WHOM | WHAT | HOW |
| | Instruction/Explanation: | | | | |
| 13 | to 1 student | T,A,O | S,D | 4 | |
| 14 | to 2 | T,A,O | 2 | 4 | |
| 15 | to small group | T,A,O | Sm | 4 | |
| 16 | to medium group | T,A,O | M | 4 | |
| 17 | to large/total class | T,A,O | L | 4 | |
| | Imperative Command: | | | | |
| 18 | to 1 student | T,A,O | S,D | 5 | not G |
| 19 | to 2 or more | T,A,O | 2, Sm, M,L | 5 | not G |
| | Imperative Open Quest.: | | | | |
| 20 | to 1 student | T,A,O | S,D | 5 | G |
| 21 | to 2 or more | T,A,O | 2,Sm,M,L | 5 | G |
| | Comments/General Action: | | | | |
| 22 | to 1 student | T,A,O | S,D | 6 | |
| 23 | to 2 or more | T,A,O | 2,Sm, M,L | 6 | |
| | Acknowledgment (specific): | | | | |
| 24 | to 1 student | T,A,O | S,D | 7 | not + |
| 25 | to 2 or more | T,A,O | 2,Sm,M,L | 7 | not + |

OBSERVATION: FMI Variable Definitions

Page 3

| Variable Description | | Variable Specification | | | |
|---|---|---|---|---|---|
| # | NAME | WHO | To WHOM | WHAT | HOW |
| | Praise (specific): | | | | |
| 26 | to 1 student | T,A,O | S,D | 7 | + |
| 27 | to 2 or more | T,A,O | 2,Sm,M,L | 7 | + |
| | Encouragement (general): | | | | |
| 28 | to 1 student | T,A,O | S,D | 8 | not + |
| 29 | to 2 or more | T,A,O | 2,Sm,M,L | 8 | not + |
| | General Praise: | | | | |
| 30 | to 1 student | T,A,O | S,D | 8 | + |
| 31 | to 2 or more | T,A,O | 2,Sm,M,L | 8 | + |
| | Simple Correction: | | | | |
| 32 | to 1 student | T,A,O | S,D | 9 | not (G,D,Pu) |
| 33 | to 2 or more | T,A,O | 2,Sm,M,L | 9 | not (G,D,Pu) |
| | Correction with Guidance: | | | | |
| 34 | to 1 student | T,A,O | S,D | 9 | G |
| 35 | to 2 students | T,A,O | 2 | 9 | G |
| 36 | to small group | T,A,O | Sm | 9 | G |
| 37 | to medium group | T,A,O | M | 9 | G |
| 38 | to large/total class | T,A,O | L | 9 | G |

OBSERVATION: FMI Variable Definitions

Page 4

| Variable Description | | Variable Specification | | | |
|---|---|---|---|---|---|
| # | NAME | WHO | To WHOM | WHAT | HOW |
| | Correction (Demeaning/Threatening): | | | | |
| 39 | to 1 student | T,A,O | S,D | 9 | D |
| 40 | to 2 or more | T,A,O | 2,Sm,M,L | 9 | D |
| | Correction (Punishing/No Touch or Anger) | | | | |
| 41 | to 1 student | T,A,O | S,D | 9 | Pu, not T, not - |
| 42 | to 2 or more | T,A,O | 2,Sm,M,L | 9 | Pu, not T, not - |
| 43 | "Corporal" Punishment | T,A,O | S,D,2,Sm,M,L | 9 | Pu, T, - |
| 44 | Correction (Punishing with Touch/No Anger) | T,A,O | S,D,2,Sm,M,L | 9 | Pu,T, not - |
| | Correction (Punishing with Anger): | | | | |
| 45 | to 1 student | T,A,O | S,D | 9 | Pu, - |
| 46 | to 2 or more | T,A,O | 2,Sm,M,L | 9 | Pu, - |
| | Correction (with Anger): | | | | |
| 47 | to 1 student | T,A,O | S,D | 9 | -, not (G,D,Pu) |
| 48 | to 2 or more | T,A,O | 2,Sm,M,L | 9 | -, not (G,D,Pu) |
| | No Response: | | | | |
| 49 | to 1 student | T,A,O | S,D | 10 | |
| 50 | to 2 or more | T,A,O | 2,Sm,M,L | 10 | |
| | | | | | |

**OBSERVATION: FMI Variable Definitions** Page 5

| Variable Description | | Variable Specification | | | |
|---|---|---|---|---|---|
| # | NAME | WHO | To WHOM | WHAT | HOW |
| | Flat Refusal: | | | | |
| 51 | to 1 student | T,A,O | S,D | 11 | not G, not - |
| 52 | to 2 or more | T,A,O | 2,Sm,M,L | 11 | not G, not - |
| | Refusal with Reason: | | | | |
| 53 | to 1 student | T,A,O | S,D | 11 | G |
| 54 | to 2 or more | T,A,O | 2,Sm,M,L | 11 | G |
| | Rejection: | | | | |
| 55 | to 1 student | T,A,O | S,D | 11 | - |
| 56 | to 2 or more | T,A,O | 2,Sm,M,L | 11 | - |
| | Monitor/Observe: | | | | |
| 57 | to 1 student | T,A,O | S,D | 12 | |
| 58 | to 2 or more | T,A,O | 2,Sm,M,L | 12 | |
| 59 | Monitor/Observe with Movement | T,A,O | S,D,2,Sm,M,L | 12 | X |
| 60 | Instruction by Demonstration/Writing * | T,A,O | S,D,2,Sm,M,L | 4 | Nv |
| 61 | Preparation for instruction ** | T,A,O | S,D,2,Sm,M,L | 4 | Nv |
| 62 | General Movement ** | T,A,O | S,D,2,Sm,M,L | 6 | Nv |
| 63 | General social action *** | T,A,O | S,D,2,Sm,M,L | 6 | Nv |
| | *I context only<br>**R context only<br>***S context only | | | | |

## OBSERVATION: FMI Variable Definitions

| Variable Description | | Variable Specification | | | |
|---|---|---|---|---|---|
| # | NAME | WHO | To WHOM | WHAT | HOW |
| | Special "What" Codes: | | | | |
| 64 | Adult/Students to Themselves (Inst.)* | L | L | 1-12 | |
| | -OR- | M | M | 1-12 | |
| | -OR- | Sm | Sm | 1-12 | |
| | -OR- | 2 | 2 | 1-12 | |
| 65 | Adult to Self (Non-Instructional)** | T | T | 1-12 | |
| | -OR- | A | A | 1-12 | |
| | -OR- | O | O | 1-12 | |
| 66 | Adult to Other Adult (Non-Inst.)** | T | A,O | 1-12 | |
| | -OR- | A | T,O | 1-12 | |
| | -OR- | O | T,A | 1-12 | |
| | -OR- | A,O | T | 1-12 | |
| | -OR- | T,O | A | 1-12 | |
| | -OR- | T,A | O | 1-12 | |

*I context and R,B,S combined contexts only

**R,B,S combined contexts only

**OBSERVATION: FMI Variable Definitions** Page 7 ____

| Variable Description | | Variable Specification | | | |
|---|---|---|---|---|---|
| # | NAME | WHO | To WHOM | WHAT | HOW |
| | Adult to Student(s) "How" Codes Non-Verbal: | | | | |
| 67 | to 1 student | T,A,O | S,D | 1-12 | NV |
| 68 | to 2 or more students | T,A,O | 2,Sm,M,L | 1-12 | NV |
| | Touching: | | | | |
| 69 | to 1 student | T,A,O | S,D | 1-12 | T |
| 70 | to 2 or more students | T,A,O | 2,Sm,M,L | 1-12 | T |
| | With Movement: | | | | |
| 71 | to 1 student | T,A,O | S,D | 1-12 | X |
| 72 | to 2 or more students | T,A,O | 2,Sm,M,L | 1-12 | X |
| | Materials Used: | | | | |
| 73 | to 1 student | T,A,O | S,D | 1-12 | M |
| 74 | to 2 or more students | T,A,O | 2,Sm,M,L | 1-12 | M |
| | With Humor: | | | | |
| 75 | to 1 student | T,A,O | S,D | 1-12 | H |
| 76 | to 2 or more students | T,A,O | 2,Sm,M,L | 1-12 | H |
| | Life Experience Examples: | | | | |
| 77 | to 1 student | T,A,O | S,D | 1-12 | Z |
| 78 | to 2 or more students | T,A,O | 2,Sm,M,L | 1-12 | Z |

OBSERVATION: FMI Variable Definitions

Page 8

| Variable Description | | Variable Specification | | | |
|---|---|---|---|---|---|
| # | NAME | WHO | To WHOM | WHAT | HOW |
| | **With Guidance:** | | | | |
| 79 | to 1 student | T,A,O | S,D | 1-12 | G |
| 80 | to 2 or more students | T,A,O | 2,Sm,M,L | 1-12 | G |
| | **Demeaning/Threatening:** | | | | |
| 81 | to one student | T,A,O | S,D | 1-12 | D |
| 82 | to 2 or more students | T,A,O | 2,Sm,M,L | 1-12 | D |
| | **Punishing:** | | | | |
| 83 | to 1 student | T,A,O | S,D | 1-12 | Pu |
| 84 | to 2 or more students | T,A,O | 2,Sm,M,L | 1-12 | Pu |
| | **Positive Affect:** | | | | |
| 85 | to 1 student | T,A,O | S,D | 1-12 | + |
| 86 | to 2 or more students | T,A,O | 2,Sm,M,L | 1-12 | + |
| | **Negative Affect:** | | | | |
| 87 | to 1 student | T,A,O | S,D | 1-12 | - |
| 88 | to 2 or more students | T,A,O | 2,Sm,M,L | 1-12 | - |
| | **Positive Touch:** | | | | |
| 89 | to 1 student | T,A,O | S,D | 1-12 | T, not-, not(D,Pu) |
| 90 | to 2 or more students | T,A,O | 2,Sm,M,L | 1-12 | T, not-, not(D,Pu) |

| Variable Description | | Variable Specification | | | |
|---|---|---|---|---|---|
| # | NAME | WHO | To WHOM | WHAT | HOW |
| | Positive Humor: | | | | |
| 91 | to 1 student | T,A,O | S,D | 1-12 | H, not-, not(D,Pu) |
| 92 | to 2 or more students | T,A,O | 2,Sm,M,L | 1-12 | H, not-, not(D,Pu) |
| | General Positive Affect: | | | | |
| 93 | to 1 student | T,A,O | S,D | 1-12 | T, not-, not(D,Pu) |
| | -AND/OR- | T,A,O | S,D | 1-12 | H, not-, not(D,Pu) |
| | -AND/OR- | T,A,O | S,D | 1-12 | + |
| 94 | to 2 or more students | T,A,O | 2,Sm,M,L | 1-12 | T, not-, not (D,Pu |
| | -AND/OR- | T,A,O | 2,Sm,M,L | 1-12 | H, not-, not(D,Pu) |
| | -AND/OR- | T,A,O | 2,Sm,M,L | 1-12 | + |
| | General Negative Affect: | | | | |
| 95 | to 1 student | T,A,O | S,D | 1-12 | (D,Pu) |
| | -AND/OR- | T,A,O | S,D | 1-12 | - |
| 96 | to 2 or more students | T,A,O | 2,Sm,M,L | 1-12 | (D,Pu) |
| | -AND/OR- | T,A,O | 2,Sm,M,L | 1-12 | - |
| | General Neutral Affect: | | | | |
| 97 | to 1 student | T,A,O | S,D | 1-12 | not(D,Pu), not H<br>not(+,-), not T |
| 98 | to 2 or more students | T,A,O | 2,Sm,M,L | 1-12 | not(D,Pu), not H<br>not (+,-), not T |

OBSERVATION: FMI Variable Definitions Page 10

| Variable Description | | Variable Specification | | | |
|---|---|---|---|---|---|
| # | NAME | WHO | To WHOM | WHAT | HOW |
| | Alternate Teacher Variables: | | | | |
| 99 | Alternate Teacher Direction of Class | A,O | S,D,2,Sm,M,L | 1-12 | |
| 100 | Students(s) to Alternate Teacher | S,D,2,Sm,M,L | A,O | 1-12 | |
| | Total Student Verbal Interaction: | | | | |
| 101 | Student(s) to Adult | S,D,2,Sm,M,L | T,A,O | 1-9,11 | not NV |
| 102 | Student(s) to Adult (not responding) | S,D,2,Sm,M,L | T,A,O | 1,2,4-9 | not NV |
| | STUDENT(S) TO ADULT: "WHATS" | | | | |
| 103 | Directive Child Initiated Interaction | S,D,2,Sm,M,L | T,A,O | 1,2,4,5,9 | |
| 104 | Compliant Response | S,D,2,Sm,M,L | T,A,O | 3 | |
| 105 | Refusal | S,D,2,Sm,M,L | T,A,O | 11 | |
| 106 | Not Responding | S,D,2,Sm,M,L | T,A,O | 10 | |
| 107 | Contributing | S,D,2,Sm,M,L | T,A,O | 6,7,8 | |
| 108 | Assertive | S,D,2,Sm,M,L | T,A,O | 9,11 | |
| | -OR- | S,D,2,Sm,M,L | T,A,O | 5 | not G |
| 109 | Questioning | S,D,2,Sm,M,L | T,A,O | 1,2 | |
| | -OR- | S,D,2,Sm,M,L | T,A,O | 5 | G |
| 110 | Response (non-verbal) | S,D,2,Sm,M,L | T,A,O | 3 | NV |
| 111 | Student Direction of Activity | S | 2,Sm,M,L | 1-12 | |

## OBSERVATION: FMI Variable Definitions

| Variable Description | | Variable Specification | | | |
|---|---|---|---|---|---|
| # | NAME | WHO | To WHOM | WHAT | HOW |
| | STUDENT(S) TO ADULT: "HOWS" | | | | |
| 112 | Non-verbal | S,D,2,Sm,M,L | T,A,O | 1-12 | Nv |
| 113 | Touching | S,D,2,Sm,M,L | T,A,O | 1-12 | T |
| 114 | with Movement | S,D,2,Sm,M,L | T,A,O | 1-12 | X |
| 115 | Materials used | S,D,2,Sm,M,L | T,A,O | 1-12 | M |
| 116 | with Humor | S,D,2,Sm,M,L | T,A,O | 1-12 | H |
| 117 | Life Experience examples | S,D,2,Sm,M,L | T,A,O | 1-12 | Z |
| 118 | with Guidance | S,D,2,Sm,M,L | T,A,O | 1-12 | G |
| 119 | Demeaning/Threatening | S,D,2,Sm,M,L | T,A,O | 1-12 | D |
| 120 | Punishing | S,D,2,Sm,M,L | T,A,O | 1-12 | Pu |
| 121 | Positive Affect | S,D,2,Sm,M,L | T,A,O | 1-12 | + |
| 122 | Negative Affect | S,D,2,Sm,M,L | T,A,O | 1-12 | - |
| 123 | Positive Touch | S,D,2,Sm,M,L | T,A,O | 1-12 | T, not-, not (D,Pu |
| 124 | Positive Humor | S,D,2,Sm,M,L | T,A,O | 1-12 | H, not-, not (D,Pu |
| 125 | General Positive Affect | S,D,2,Sm,M,L | T,A,O | 1-12 | T, not-, not (D,Pu |
| | -AND/OR- | S,D,2,Sm,M,L | T,A,O | 1-12 | H, not-, not (D,Pu |
| | -AND/OR- | S,D,2,Sm,M,L | T,A,O | 1-12 | + |
| 126 | General Negative Affect<br>-AND/OR- | S,D,2,Sm,M,L<br>S,D,2,Sm,M,L | T,A,O<br>T,A,O | 1-12<br>1-12 | (D,Pu)<br>- |
| 127 | General Neutral Affect | S,D,2,Sm,M,L | T,A,O | 1-12 | not(D,Pu), not(+,-) not H, not T |

# APPENDIX E

Summary Report:

- Physical Environment Inventory
- Daily Summary
- Classroom Snapshot

```
|I|D|E|A| STUDY OF SCHOOLING -- CLASSROOM OBSERVATION (SECONDARY): PHYS.ENV., DAILY SUMMARY & SNAPSHOT DATA            PAGE 1002
    SENIOR HIGH SCHOOL          (31)     SUBJECT: ENGLISH-READING-LANGUAGE ARTS (1)     CLASS NUMBER: 005             31-005-01

CLASS DESCRIPTION: PERIOD 4    GRADE RANGE: 11 TO 12    SCHED. TIME  55 MIN.    NO. STUDENTS: 24    NO. TEACHERS: 1    NO. AIDES: 0
OBSERVATION RECORD: NO. PERIODS OBSERVED: 3   TOTAL NO. OBS. BOOKS:  3  NO. BOOKS PER OBSERVATION (PERIOD): 1ST  1  2ND  1  3RD  1
PHYSICAL ENVIRONMENT INVENTORY
  SPACE:
    1. SINGLE ROOM                                              CLASSROOM EQUIVALENCE: SINGLE CLASS       STUDENT-SPACE RATIO: 24.0
    2. ROOM WITHOUT ADJACENT USABLE SPACE
  FURNITURE - FURNISHINGS:
    1. DESKS OR TABLES WITH SEATS ATTACHED                     2. MOVABLE DESKS/TABLES
    3. DESKS/TABLES IN ROWS                                    4. NO LEARNING CENTERS
    5. NO STUFFED FURNITURE                                    6. NO RUGS, CARPET
    7. DEGREE OF ALTERATION TO PHYS. ENV.: LITTLE OR NONE      8.  (MISSING OR INVALID DATA)
    9. NO FOREIGN DISPLAYS
  EQUIPMENT & MATERIALS
    1. BOOKS, MAGAZINES         2. NO GAMES, PUZZLES         3. NO MAPS, GLOBES
    4. NO LIVE ANIMALS          5. NO LIVE PLANTS            6. NO TEACHING AIDS
    7. NO TAPES                 8. NO AV EQUIPMENT           9. CHALKBOARD
   10. NO ART MATERIALS        11. NO TEACHING MACHINES     12. NO OVERHEAD PROJECTORS

"DAILY" (PERIOD OR OBSERVATION) SUMMARY
  (THE FOLLOWING DATA ARE MEANS & TALLIES OVER THE TOTAL NUMBER OF OBSERVATIONS INDICATED ABOVE.)

  SPACE RATING (ON A SCALE OF 1 = CROWDED, 2 = ADEQUATE, 3 = SPACIOUS):  2.00
  ADEQUACY OF MATERIALS RATING (ON A SCALE OF 1 = INADEQUATE, 2 = ADEQUATE):  2.00
  STUDENT USE OF MATERIALS & EQUIPMENT RATING (ON A SCALE OF 1 = RESTRICTED,  2 = PARTIALLY RESTRICTED, 3 = UNRESTRICTED): 2.00
    ("NO OPPORTUNITY TO OBSERVE": FREQUENCY = 1;  % = 033.3)
  LOCUS OF DECISION-MAKING RATINGS (ON A SCALE OF 1 = PREDOMINANTLY TEACHER, 2 = PREDOMINANTLY STUDENT):
                                          "NOT OBSERVED"
    LOCI                     MEAN         FREQ.   %
    SEATS ................   1.00           0    000.0
    GROUPS ...............   2.00           2    066.7
    CONTENT ..............   1.00           0    000.0
    MATERIALS ............   1.00           2    066.7
    SPACE ................   1.00           2    066.7
    TIME .................   1.33           0    000.0
    LEARNING ACTIVITIES      1.00           1    033.3

      OVERALL LOCI ......    1.19           7     33.3
```

|1|D|E|A| STUDY OF SCHOOLING -- CLASSROOM OBSERVATION (SECONDARY): PHYS.ENV., DAILY SUMMARY & SNAPSHOT DATA

SENIOR HIGH SCHOOL (31) SUBJECT: ENGLISH-READING-LANGUAGE ARTS (1) CLASS NUMBER: 005

SNAPSHOT PROFILE

ACCOUNTING VARIABLES: NO. VALID SNAPSHOTS: 10 MEAN WEIGHTS FOR GROUP SIZES: SMALL 3.3 MEDIUM 0.0 LARGE 19.0

MEAN NUMBER OF PERSONS PER SNAPSHOT: STUDENTS 18.9 TEACHERS 1.0 AIDES 0.0 VISITORS 0.0

SUMMARY VARIABLES

ACTIVITY 2(%): STORY TIME 0.0 MATERIALS & EQUIPMENT 0.0

ACTIVITY 11(%): TELEVISION, RADIO 0.0 TAPES, RECORDS 0.0 TEACHING MACHINES 0.0 FILMS, FILMSTRIPS 0.0

ACTIVITY 18 (% OF CLASS AT HIGH INTEREST LEVEL: MEAN RATING ON A SCALE OF 1 = 0-24%, 2 = 25-49%, 3 = 50-74%, 4 = 75-100%): 3.33

VARIETY OF INSTRUCTIONAL ACTIVITIES: BY SNAPSHOT 1.0 BY OBSERVATION 2.0

VARIETY OF GROUPING: BY SNAPSHOT 1.2 BY OBSERVATION 2.3

ACTIVITY-BY-DIRECTOR-BY-GROUP CONFIGURATIONS (SUMMATIONS OVER ALL SNAPSHOTS):

| CONFIGURATION IDENTIFICATION | | | | SIMPLE OCCURRENCE | | | | | WEIGHTED # OF STUDENTS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RELATIVE FREQUENCY (%) | | | | | RELATIVE NUMBER (%) | | | |
| ACTIVITY # | ACTIVITY DESCRIPTION | DIRECTOR | GROUP | FREQUENCY | BY ACT. | BY DIRECT. | BY GROUP | BY TOTAL | MEAN PER SNAP. | BY ACT. | BY DIRECT. | BY GROUP | BY TOTAL |
| ANY | 1 THRU 13 | ANY | ANY | 16 | N/A | N/A | N/A | N/A | 18.9 | N/A | N/A | N/A | N/A |
| ANY | 1 THRU 16 | ANY | ANY | 20 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 1 | PREP FOR ASS-INS-CLN | ANY | ANY | 1 | N/A | N/A | N/A | 5.0 | 1.9 | N/A | N/A | N/A | 10.1 |
| 2 | EXPLN-LECT-READ-ALOU | ANY | ANY | 3 | N/A | N/A | N/A | 15.0 | 5.8 | N/A | N/A | N/A | 30.7 |
| 4 | DISCUSSION | ANY | ANY | 2 | N/A | N/A | N/A | 10.0 | 2.1 | N/A | N/A | N/A | 11.3 |
| 6 | READING | ANY | ANY | 1 | N/A | N/A | N/A | 5.0 | 0.3 | N/A | N/A | N/A | 1.8 |
| 10 | TAKING TEST-QUIZ | ANY | ANY | 4 | N/A | N/A | N/A | 20.0 | 7.5 | N/A | N/A | N/A | 39.7 |
| 12 | S NONTASK-T SOCIAL | ANY | ANY | 5 | N/A | N/A | N/A | 25.0 | 1.2 | N/A | N/A | N/A | 6.5 |
| 14 | ADULT MONITOR-OBS S | ANY | ANY | 1 | N/A | N/A | N/A | 5.0 | 0.0 | N/A | N/A | N/A | 0.0 |
| 15 | ADULT CUSTODIAL-ROUT | ANY | ANY | 3 | N/A | N/A | N/A | 15.0 | 0.0 | N/A | N/A | N/A | 0.0 |
| ANY | 1 THRU 16 | TCHR | ANY | 10 | N/A | N/A | N/A | 50.0 | 9.8 | N/A | N/A | N/A | 52.1 |
| ANY | 1 THRU 16 | COOP | ANY | 2 | N/A | N/A | N/A | 10.0 | 0.7 | N/A | N/A | N/A | 3.6 |
| ANY | 1 THRU 16 | INDP | ANY | 8 | N/A | N/A | N/A | 40.0 | 8.4 | N/A | N/A | N/A | 44.3 |
| ANY | 1 THRU 13 | ANY | ONE | 2 | N/A | N/A | N/A | 12.5 | 0.2 | N/A | N/A | N/A | 1.1 |
| ANY | 1 THRU 13 | ANY | SML | 5 | N/A | N/A | N/A | 31.2 | 1.7 | N/A | N/A | N/A | 9.0 |
| ANY | 1 THRU 13 | ANY | LRG | 1 | N/A | N/A | N/A | 6.3 | 1.9 | N/A | N/A | N/A | 10.1 |
| ANY | 1 THRU 13 | ANY | TOT | 8 | N/A | N/A | N/A | 50.0 | 15.1 | N/A | N/A | N/A | 79.9 |
| 1 | PREP FOR ASS-INS-CLN | TCHR | ANY | 1 | 100.0 | 10.0 | N/A | 5.0 | 1.9 | 100.0 | 19.3 | N/A | 10.1 |
| 2 | EXPLN-LECT-READ-ALOU | TCHR | ANY | 3 | 100.0 | 30.0 | N/A | 15.0 | 5.8 | 100.0 | 58.9 | N/A | 30.7 |
| 4 | DISCUSSION | TCHR | ANY | 2 | 100.0 | 20.0 | N/A | 10.0 | 2.1 | 100.0 | 21.7 | N/A | 11.3 |
| 6 | READING | INDP | ANY | 1 | 100.0 | 12.5 | N/A | 5.0 | 0.3 | 100.0 | 4.1 | N/A | 1.9 |
| 10 | TAKING TEST-QUIZ | INDP | ANY | 4 | 100.0 | 50.0 | N/A | 20.0 | 7.5 | 100.0 | 89.5 | N/A | 39.7 |
| 12 | S NONTASK-T SOCIAL | COOP | ANY | 2 | 40.0 | 100.0 | N/A | 10.0 | 0.7 | 55.7 | 100.0 | N/A | 3.6 |
| 12 | S NONTASK-T SOCIAL | INDP | ANY | 3 | 60.0 | 37.5 | N/A | 15.0 | 0.5 | 44.3 | 6.4 | N/A | 2.9 |
| 14 | ADULT MONITOR-OBS S | TCHR | ANY | 1 | 100.0 | 10.0 | N/A | 5.0 | N/A | N/A | N/A | N/A | N/A |
| 15 | ADULT CUSTODIAL-ROUT | TCHR | ANY | 3 | 100.0 | 30.0 | N/A | 15.0 | N/A | N/A | N/A | N/A | N/A |
| 1 | PREP FOR ASS-INS-CLN | ANY | TOT | 1 | 100.0 | N/A | 12.5 | 6.3 | 1.9 | 100.0 | N/A | 12.8 | 10.1 |
| 2 | EXPLN-LECT-READ-ALOU | ANY | TOT | 3 | 100.0 | N/A | 37.5 | 18.7 | 5.8 | 100.0 | N/A | 38.4 | 30.7 |
| 4 | DISCUSSION | ANY | SML | 1 | 50.0 | N/A | 20.0 | 6.3 | 0.3 | 15.9 | N/A | 20.0 | 1.8 |
| 4 | DISCUSSION | ANY | TOT | 1 | 50.0 | N/A | 12.5 | 6.3 | 1.8 | 84.1 | N/A | 11.9 | 9.5 |
| 6 | READING | ANY | SML | 1 | 100.0 | N/A | 20.0 | 6.3 | 0.3 | 100.0 | N/A | 20.0 | 1.8 |
| 10 | TAKING TEST-QUIZ | ANY | LRG | 1 | 25.0 | N/A | 100.0 | 6.3 | 1.9 | 25.3 | N/A | 100.0 | 10.1 |
| 10 | TAKING TEST-QUIZ | ANY | TOT | 3 | 75.0 | N/A | 37.5 | 18.7 | 5.6 | 74.7 | N/A | 37.1 | 29.6 |
| 12 | S NONTASK-T SOCIAL | ANY | ONE | 2 | 40.0 | N/A | 100.0 | 12.5 | 0.2 | 16.4 | N/A | 100.0 | 1.1 |
| 12 | S NONTASK-T SOCIAL | ANY | SML | 3 | 60.0 | N/A | 60.0 | 18.7 | 1.0 | 83.6 | N/A | 60.0 | 5.4 |
| ANY | 1 THRU 13 | TCHR | SML | 1 | N/A | 16.7 | 20.0 | 6.3 | 0.3 | N/A | 3.5 | 20.0 | 1.8 |
| ANY | 1 THRU 13 | TCHR | TOT | 5 | N/A | 83.3 | 62.5 | 31.2 | 9.5 | N/A | 96.5 | 62.9 | 50.3 |
| ANY | 1 THRU 13 | COOP | SML | 2 | N/A | 100.0 | 40.0 | 12.5 | 0.7 | N/A | 100.0 | 40.0 | 3.6 |
| ANY | 1 THRU 13 | INDP | ONE | 2 | N/A | 25.0 | 100.0 | 12.5 | 0.2 | N/A | 2.4 | 100.0 | 1.1 |
| ANY | 1 THRU 13 | INDP | SML | 2 | N/A | 25.0 | 40.0 | 12.5 | 0.7 | N/A | 8.1 | 40.0 | 3.6 |
| ANY | 1 THRU 13 | INDP | LRG | 1 | N/A | 12.5 | 100.0 | 6.3 | 1.9 | N/A | 22.7 | 100.0 | 10.1 |

SENIOR HIGH SCHOOL (31) SUBJECT: ENGLISH-READING-LANGUAGE ARTS (1) CLASS NUMBER: 005 31-005-03

ACTIVITY-BY-DIRECTOR-BY-GROUP CONFIGURATIONS (SUMMATIONS OVER ALL SNAPSHOTS):

| CONFIGURATION IDENTIFICATION | | | | SIMPLE OCCURENCE | | | | | WEIGHTED # OF STUDENTS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RELATIVE FREQUENCY (%) | | | | | RELATIVE NUMBER (%) | | | |
| ACTIV-ITY # | ACTIVITY DESCRIPTION | DI-REC-TOR | GROUP | FRE-QUEN-CY | BY ACT. | BY DIRECT. | BY GROUP | BY TOTAL | MEAN PER SNAP. | BY ACT. | BY DIRECT. | BY GROUP | BY TOTAL |
| ANY | 1 THRU 13 | INDP | TOT | 3 | N/A | 37.5 | 37.5 | 18.7 | 5.6 | N/A | 66.8 | 37.1 | 29.6 |
| 1 | PREP FOR ASS-INS-CLN | TCHR | TOT | 1 | 100.0 | 16.7 | 12.5 | 6.3 | 1.9 | 100.0 | 19.3 | 12.6 | 10.1 |
| 2 | EXPLN-LECT-READ-ALOU | TCHR | TOT | 3 | 100.0 | 50.0 | 37.5 | 18.7 | 5.8 | 100.0 | 55.9 | 38.4 | 30.7 |
| 4 | DISCUSSION | TCHR | SML | 1 | 50.0 | 16.7 | 20.0 | 6.3 | 0.3 | 15.9 | 3.5 | 20.0 | 1.9 |
| 4 | DISCUSSION | TCHR | TOT | 1 | 50.0 | 16.7 | 12.5 | 6.3 | 1.6 | 84.1 | 18.3 | 11.9 | 9.5 |
| 6 | READING | INDP | SML | 1 | 100.0 | 12.5 | 20.0 | 6.3 | 0.3 | 100.0 | 4.1 | 20.0 | 1.9 |
| 10 | TAKING TEST-QUIZ | INDP | LRG | 1 | 25.0 | 12.5 | 100.0 | 6.3 | 1.9 | 25.3 | 22.7 | 100.0 | 10.1 |
| 13 | TAKING TEST-QUIZ | INDP | TOT | 3 | 75.0 | 37.5 | 37.5 | 18.7 | 5.6 | 74.7 | 66.8 | 37.1 | 29.6 |
| 12 | S NONTASK-T SOCIAL | COOP | SML | 2 | 40.0 | 100.0 | 40.0 | 12.5 | 0.7 | 55.7 | 100.0 | 40.0 | 3.6 |
| 12 | S NONTASK-T SOCIAL | INDP | ONE | 2 | 40.0 | 25.0 | 100.0 | 12.5 | 0.2 | 16.4 | 2.4 | 100.0 | 1.1 |
| 12 | S NONTASK-T SOCIAL | INDP | SML | 1 | 20.0 | 12.5 | 20.0 | 6.3 | 0.3 | 27.9 | 4.1 | 20.0 | 1.9 |
| 17 | S NONTASK DURING SUB | ANY | ANY | 8 | N/A | N/A | N/A | 50.0 | 1.3 | N/A | N/A | N/A | 6.9 |
| 17 | S NONTASK DURING SUB | ANY | ONE | 3 | N/A | N/A | 150.0 | 18.8 | 0.3 | N/A | N/A | 150.0 | 1.6 |
| 17 | S NONTASK DURING SUB | ANY | SML | 5 | N/A | N/A | 100.0 | 31.3 | 1.0 | N/A | N/A | 58.8 | 5.3 |
| 17 | S NONTASK DURING SUB | COOP | ANY | 4 | N/A | 200.0 | N/A | 25.0 | 0.8 | N/A | 117.6 | N/A | 4.2 |
| 17 | S NONTASK DURING SUB | INDP | ANY | 4 | N/A | 50.0 | N/A | 25.0 | 0.5 | N/A | 6.0 | N/A | 2.6 |
| 17 | S NONTASK DURING SUB | COOP | SML | 4 | N/A | 200.0 | 80.0 | 25.0 | 0.8 | N/A | 117.6 | 47.1 | 4.2 |
| 17 | S NONTASK DURING SUB | INDP | ONE | 3 | N/A | 37.5 | 150.0 | 18.8 | 0.3 | N/A | 3.6 | 150.0 | 1.6 |
| 17 | S NONTASK DURING SUB | INDP | SML | 1 | N/A | 12.5 | 20.0 | 6.3 | 0.2 | N/A | 2.4 | 11.8 | 1.1 |

# APPENDIX F

## Summary Report: Five Minute Interaction

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|I|D|E|A| STUDY OF SCHOOLING -- CLASSROOM OBSERVATION (SECONDARY): FIVE MINUTE INTERACTION DATA
      SENIOR HIGH SCHOOL        (31) SUBJECT: ENGLISH-READING-LANGUAGE ARTS (1)     CLASS NUMBER: 005          31-005-01

CLASS DESCRIPTION: PERIOD: 4  GRADE RANGE: 11 TO 12   SCHED. TIME: 55 MIN.   NO. STUDENTS: 24   NO. TEACHERS: 1   NO. AIDES: 0
OBSERVATION RECORD: NO. PERIODS OBSERVED: 3   TOTAL NO. OBS BOOKS: 3
ACCOUNTING VARIABLES
  FMI SUMMARY: NO. OF VALID FMI'S = 12  MEAN NO. PER BOOK = 4.00   MEAN ELAPSED TIME PER FMI =  5.00 MINUTES
  FRAME SUMMARY:            NUMBER     MEAN PER FMI                                 ____________CONTEXT___________
                                                                                                                     TOTAL
     VALID FRAMES             718         59.8               REPEATED FRAMES:          1       6       8       5     IRBS    ERRORS
       ("REPEAT" FRAMES       397         33.1)                 MEAN PER FMI         23.2    08.8    00.1    01.0    33.1    00.0
     CANCELLED FRAMES           3         00.2                  % OF VALID FRAMES    38.72   14.76   00.14   01.67   55.29
     INVALID FRAMES             4         00.3               SECOND LANGUAGE FRAMES:
     UNUSED FRAMES            115         09.6                  MEAN PER FMI         00.0    00.0    00.0    00.0    00.0    00.0
                                                                % OF VALID FRAMES    00.00   00.00   00.00   00.00   00.00
       TOTAL FRAMES           840         70.0

FMI SENTENCE PARADIGMS
VARIABLE                                                                                        ______% OF VALID FRAMES______
 NUMBER                   DESCRIPTION OF SENTENCE PARADIGM                                      ________CONTEXT________  TOTAL
           CONTEXT TOTALS:                                                                       1      6      8      5   IRBS
    1                 ANYONE TO ANYONE .............................................          66.57  21.03   3.90   8.49  99.99
    2                 ADULT TO ONE STUDENT .........................................          11.26    .97    .97   3.06  16.26
    3                 ADULT TO TWO OR MORE STUDENTS ................................          23.40   2.37    .97    .83  27.57
           TOTAL ADULT VERBAL INTERACTION:
    4                 ADULT TO ONE STUDENT .........................................          10.03    .70    .83   2.65  14.21
    5                 ADULT TO TWO STUDENTS ........................................
    6                 ADULT TO SMALL, MEDIUM GROUPS ................................                        .42           .42
    7                 ADULT TO LARGE GROUP .........................................          19.36   1.95                21.31
           ADULT TO STUDENT(S) "WHATS":
    8                 DIRECT QUESTIONS: TO ONE STUDENT .............................            .70    .28    .14    .97   2.09
    9                         "       : TO TWO OR MORE STUDENTS ....................
   10                 OPEN QUESTIONS: TO ONE STUDENT ...............................           1.11   1.25                 2.36
   11                       "       : TO TWO OR MORE STUDENTS ......................            .14                  .28    .42
   12                 RESPONSE: TO ONE OR MORE STUDENTS ............................            .70                         .70
   13                 INSTRUCTION/EXPLANATION: TO ONE STUDENT ......................           2.78    .42           .28   3.48
   14                          "               : TO TWO STUDENTS ...................           1.81                  .14   1.95
   15                          "               : TO A SMALL GROUP ..................
   16                          "               : TO A MEDIUM GROUP .................
   17                          "               : TO A LARGE GROUP ..................
   18                 IMPERATIVE COMMAND: TO ONE STUDENT ...........................          17.13    .14                17.27
   19                         "         : TO TWO OR MORE STUDENTS ..................
   20                 IMPERATIVE OPEN QUESTION: TO ONE STUDENT .....................            .28    .14                  .42
   21                            "            : TO TWO OR MORE STUDENTS ............
   22                 COMMENTS/GENERAL ACTION: TO ONE STUDENT ......................           2.65    .14          1.11   3.90
   23                            "           : TO TWO OR MORE STUDENTS .............            .14    .42                  .56
   24                 ACKNOWLEDGMENT(SPECIFIC): TO ONE STUDENT .....................            .56                         .56
   25                            "            : TO TWO OR MORE STUDENTS ............
   26                 PRAISE(SPECIFIC): TO ONE STUDENT .............................
   27                         "       : TO TWO OR MORE STUDENTS ....................
   28                 ENCOURAGEMENT(GENERAL): TO ONE STUDENT .......................           1.25                        1.25
   29                            "          : TO TWO OR MORE STUDENTS ..............
   30                 GENERAL PRAISE: TO ONE STUDENT ...............................
   31                       "       : TO TWO OR MORE STUDENTS ......................
   32                 SIMPLE CORRECTION: TO ONE STUDENT ............................            .28           .83          1.11
   33                         "        : TO TWO OR MORE STUDENTS ...................                          .83           .83
   34                 CORRECTION WITH GUIDANCE: TO ONE STUDENT .....................            .28                         .28
   35                            "            : TO TWO STUDENTS ....................
   36                            "            : TO SMALL GROUP .....................
   37                            "            : TO MEDIUM GROUP ....................
   38                            "            : TO LARGE GROUP .....................
   39                 CORRECTION(DEMEANING/THREATENING): TO ONE STUDENT ............
   40                                 "                : TO TWO OR MORE STUDENTS ...
   41                 CORRECTION(PUNISHING/NO TOUCH OR ANGER): TO ONE STUDENT ......
   42                                   "                    : TO TWO OR MORE STUDENTS ..
   43                 "CORPORAL" PUNISHMENT: TO ONE OR MORE STUDENTS ...............
   44                 CORRECTION(PUNISH WITH TOUCH/NO ANGER): TO ONE OR MORE STUDENTS ...
   45                 CORRECTION(PUNISH WITH ANGER): TO ONE STUDENT ................
   46                                 "            : TO TWO OR MORE STUDENTS .......
   47                 CORRECTION(WITH ANGER): TO ONE STUDENT .......................
   48                            "          : TO TWO OR MORE STUDENTS ..............
   49                 NO RESPONSE: TO ONE STUDENT ..................................
   50                      "     : TO TWO OR MORE STUDENTS .........................
   51                 FLAT REFUSAL: TO ONE STUDENT .................................            .14                         .14
   52                       "     : TO TWO OR MORE STUDENTS ........................
   53                 REFUSAL WITH REASON: TO ONE STUDENT ..........................
   54                          "         : TO TWO OR MORE STUDENTS .................
   55                 REJECTION: TO ONE STUDENT ....................................
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|I|D|E|A| STUDY OF SCHOOLING -- CLASSROOM OBSERVATION (SECONDARY): FIVE MINUTE INTERACTION DATA
      SENIOR HIGH SCHOOL     (31) SUBJECT: ENGLISH-READING-LANGUAGE ARTS (1)     CLASS NUMBER: 005            PAGE 0846
VARIABLE                                                                                                           31-005-02
 NUMBER                                                                         ---------% OF VALID FRAMES---------
          ----------------DESCRIPTION OF SENTENCE PARADIGM--------------------  -------------CONTEXT----------  TOTAL
                                                                                 __I__    __B__    __G__    __S__   1885
  56                    "    : TO TWO OR MORE STUDENTS ..........................
  57               MONITOR/OBSERVE: TO ONE STUDENT ..............................   .70      .14               .28    1.12
  58                    "         : TO TWO OR MORE STUDENTS .....................  4.04      .42      .14      .83    5.43
  59                    "           WITH MOVEMENT: TO ONE OR MORE STUDENTS ......   .14                                .14
  60               INSTRUCTION BY DEMONSTRATION: TO ONE OR MORE STUDENTS ........          *****    *****    *****
  61               PREPARATION FOR INSTRUCTION: TO ONE OR MORE STUDENTS .........  *****             *****    *****
  62               GENERAL MOVEMENT: TO ONE OR MORE STUDENTS ....................  *****             *****    *****
  63               GENERAL SOCIAL ACTION: TO ONE OR MORE STUDENTS ...............  *****    *****    *****      .14     .14
            SPECIAL "WHAT" CODES:
  64               GROUP ACTIVITY (TEACHER INCLUDED): TWO OR MORE STUDENTS TO SAME ...     |------           ------
  65               ADULT WORKING ALONE: ADULT TO SELF ...........................  *****   |------  15.88   ------|  15.88
  66               ADULT INTERACTING WITH OTHER ADULT: ADULT TO OTHER ADULT .....  *****   |------   1.11   ------|   1.11
            ADULT TO STUDENT(S) "HOW" CODES":
  67               NONVERBAL: TO ONE STUDENT ....................................   .56      .14      .14      .14     .98
  68                    "   : TO TWO OR MORE STUDENTS ...........................   .14               .42               .56
  69               TOUCHING: TO ONE STUDENT .....................................
  70                    "   : TO TWO OR MORE STUDENTS ...........................
  71               WITH MOVEMENT: TO ONE STUDENT ................................   .14                                .14
  72                    "       : TO TWO OR MORE STUDENTS .......................
  73               MATERIALS USED: TO ONE STUDENT ...............................
  74                    "        : TO TWO OR MORE STUDENTS ......................
  75               WITH HUMOR: TO ONE STUDENT ...................................   .14                                .14
  76                    "    : TO TWO OR MORE STUDENTS ..........................   .14                                .14
  77               LIFE EXPERIENCE EXAMPLES: TO ONE STUDENT .....................   .42                        .28     .70
  78                    "                  : TO TWO OR MORE STUDENTS ............
  79               WITH GUIDANCE: TO ONE STUDENT ................................   .28                                .28
  80                    "       : TO TWO OR MORE STUDENTS .......................
  81               DEMEANING/THREATENING: TO ONE STUDENT ........................
  82                    "               : TO TWO OR MORE STUDENTS ...............
  83               PUNISHING: TO ONE STUDENT ....................................
  84                    "   : TO TWO OR MORE STUDENTS ...........................
  85               POSITIVE AFFECT: TO ONE STUDENT ..............................
  86                    "         : TO TWO OR MORE STUDENTS .....................                     .14               .14
  87               NEGATIVE AFFECT: TO ONE STUDENT ..............................
  88                    "         : TO TWO OR MORE STUDENTS .....................                     .14               .14
  89               POSITIVE TOUCH: TO ONE STUDENT ...............................
  90                    "        : TO TWO OR MORE STUDENTS ......................
  91               POSITIVE HUMOR: TO ONE STUDENT ...............................   .14                                .14
  92                    "        : TO TWO OR MORE STUDENTS ......................   .14                                .14
  93               GENERAL POSITIVE AFFECT: TO ONE STUDENT ......................   .14                                .14
  94                    "                 : TO TWO OR MORE STUDENTS .............   .14               .14               .28
  95               GENERAL NEGATIVE AFFECT: TO ONE STUDENT ......................
  96                    "                 : TO TWO OR MORE STUDENTS .............                     .14      .83     .97
  97               GENERAL NEUTRAL AFFECT: TO ONE STUDENT .......................  11.14      .97      .97     3.06   16.14
  98                    "                : TO TWO OR MORE STUDENTS ..............  23.26     2.37      .70      .83   27.16
            ALTERNATE TEACHER VARIABLES:
  99               ALTERNATE TEACHER DIRECTION OF CLASS .........................
 100               STUDENT(S) TO ALTERNATE TEACHER ..............................
            TOTAL STUDENT VERBAL INTERACTION:
 101               STUDENT(S) TO ADULT ..........................................   9.89     1.11      .70     3.90   15.60
 102               STUDENT(S) TO ADULT(NOT RESPONDING) ..........................   7.10      .70      .28     2.51   10.59
            STUDENT(S) "WHAT" CODES - ADULT INVOLVED:
 103               CHILD INITIATED INTERACTION ..................................   3.20      .42               .28    3.90
 104               RESPONSE .....................................................   3.06      .56     1.67     1.39    6.68
 105               REFUSAL ......................................................
 106               NOT RESPONDING ...............................................    .56                               .56
 107               CONTRIBUTING .................................................   4.04      .42      .28     2.23    6.97
 108               ASSERTIVE ....................................................    .14      .14                       .28
 109               QUESTIONING ..................................................   3.06      .28               .28    3.62
 110               RESPONSE--NONVERBAL ..........................................    .28      .14     1.25              1.67
 111               STUDENT DIRECTION OF ACTIVITY ................................
            STUDENT(S) TO ADULT "HOWS":
 112               NONVERBAL ....................................................    .42      .28     1.25              1.95
 113               TOUCHING .....................................................
 114               WITH MOVEMENT ................................................    .28      .14      .14               .56
 115               MATERIALS USED ...............................................
 116               WITH HUMOR ...................................................    .28                        .14     .42
 117               LIFE EXPERIENCE EXAMPLES .....................................
 118               WITH GUIDANCE ................................................
 119               DEMEANING ....................................................
 120               PUNISHING ....................................................
 121               POSITIVE AFFECT ..............................................
 122               NEGATIVE AFFECT ..............................................
 123               POSITIVE TOUCH ...............................................
 124               POSITIVE HUMOR ...............................................    .28                        .14     .42
 125               GENERAL POSITIVE AFFECT ......................................    .28                        .14     .42
 126               GENERAL NEGATIVE AFFECT ......................................
 127               GENERAL NEUTRAL AFFECT .......................................  10.58     1.39     1.95     3.76   17.68
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